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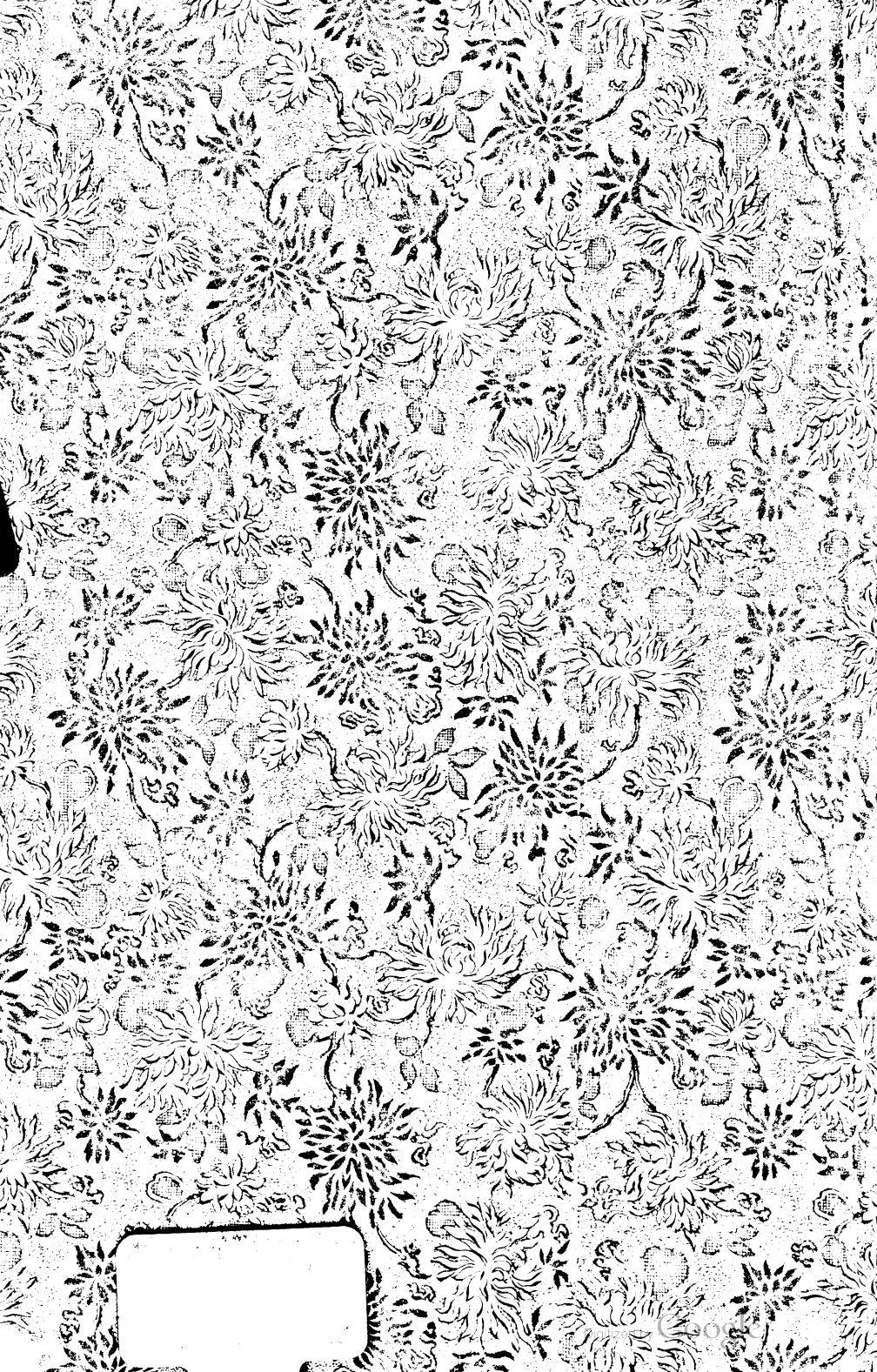

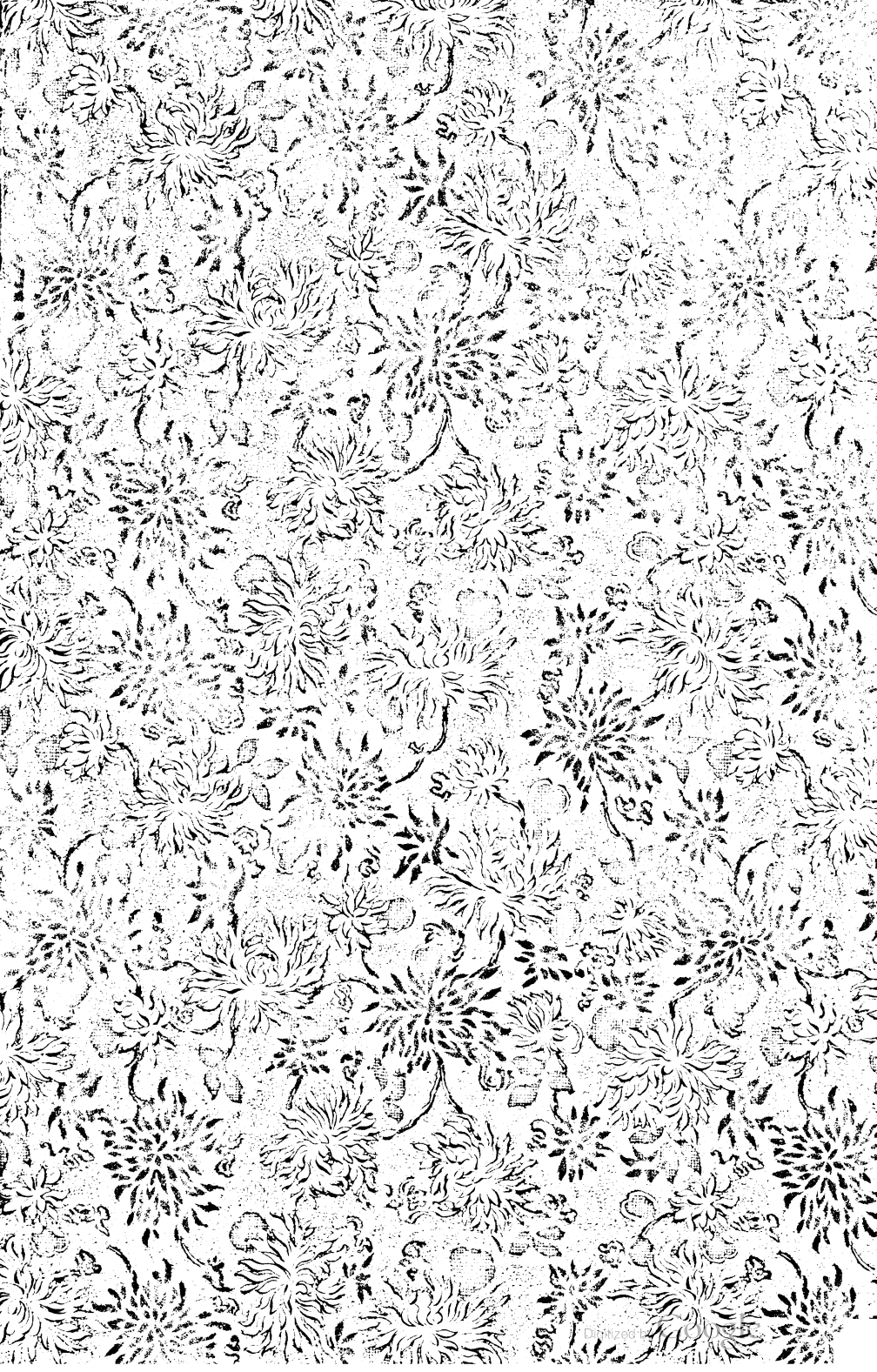

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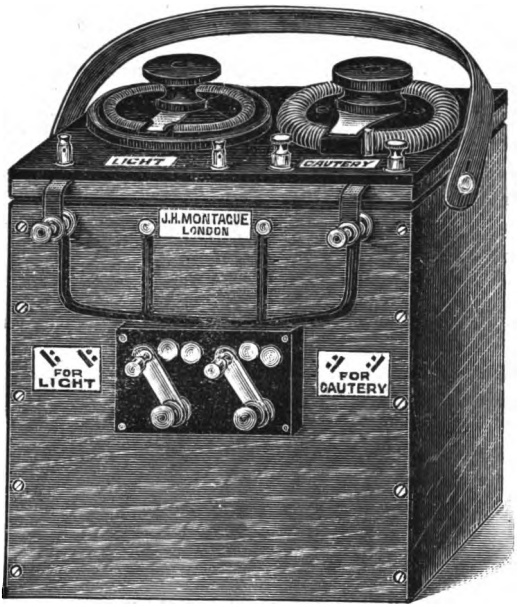

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TRANSACTIONS

OF THE

BRITISH

ORTHOPÆDIC SOCIETY

VOLUME II.

SESSION 1896

PUBLISHED BY THE SOCIETY

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85-89, GREAT TITCHFIELD STREET, OXFORD STREET, W.

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LIST OF OFFICERS, 1896.

Council—

B. E. BRODHURST, F.R.C.S.Eng.
J. EWENS, L.R.C.P., &c.
ROBERT JONES, F.R.C.S.E.
E. MUIRHEAD LITTLE, F.R.C.S.Eng.
T. H. OPENSHAW, M.S.Dur., F.R.C.S.Eng.
H. G. RAWDON, M.D., F.R.C.S.E.
NOBLE SMITH, F.R.C.S.E.
S. SUNDERLAND, M.D., M.R.C.S.
W. J. WALSHAM, F.R.C.S.Eng., C.M.Aberdeen.

Hon. Treasurer—

C. R. B. KEETLEY, F.R.C.S.Eng.,
56, Grosvenor St., London, W.

Hon. Secretaries—

E. LUKE FREER, M.R.C.S.Eng.,
9, Newhall St., Birmingham.

A. H. TUBBY, M.S.Lond., F.R.C.S.Eng.,
25, Weymouth St., Portland Place, London, W.

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Constitution and Rules of the British Orthopædic Society.

NAME, OBJECT, AND CONSTITUTION.

1.—The Society shall be called the "BRITISH ORTHOPÆDIC SOCIETY."

2.—The Society shall consist of Ordinary, Honorary and Corresponding members.

3.—The object of the Society shall be the advancement of Orthopædic Surgery.

4.—All Registered Medical Practitioners shall be eligible as members of the Society.

5.—The Officers of the Society shall be, an Hon. Treasurer, two Hon. Secretaries (one from London and one from the country), and a Council consisting of nine members (four to form a quorum).

APPOINTMENT OF OFFICERS.

6.—The Hon. Treasurer shall be elected annually, and shall be eligible for re-election, and the Hon. Secretaries shall hold office for three years, except in the case of those first appointed, one of whom shall retain the office for four years. Of the Council one-third shall retire annually in rotation, and shall not be eligible for re-election during the succeeding year.

SUBSCRIPTION.

7.—The Subscription shall be half a guinea annually, payable in advance on the first day of November of each year.

ELECTION OF MEMBERS.

8.—Every candidate for membership of the Society shall be proposed in writing to the Council by two or more subscribing members having personal knowledge of him; such proposal shall be made not less than three weeks before a meeting of the Council, and if approved the candidate shall be proposed and his address and qualifications shall be submitted to the subsequent Ordinary Meeting. The Ballot for election shall be held at the Ordinary Meeting, the next after that at which the candidate was proposed.

9.—The mode of election shall be by ballot, one black ball in four to exclude.

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NOTICE OF ORDINARY MEETINGS.

10.—The Hon. Secretaries shall give not less than fourteen days' notice of each Ordinary Meeting, setting forth the business to be transacted.

DUTIES OF HON. TREASURER.

11.—The duties of the Hon. Treasurer shall consist in having charge of the funds of the Society, in receiving sums due to it, and in paying such bills as are directed by the Council to be discharged under the signature of its Chairman; he shall make up and balance the accounts of the Society to the 1st November in each year, showing the receipts, payments and liabilities remaining undischarged. At the last meeting in October the Society shall, on the nomination of the Chairman, appoint from those members who are not in office, two auditors who shall examine the Treasurers' accounts with the vouchers annexed, and deliver a written report on the subject to the Council at their first meeting in the ensuing December.

DUTIES OF HON. SECRETARIES.

12.—The duties of the Hon. Secretaries shall consist in taking minutes of the transactions of the Society and of its Council, in reading these minutes at the commencement of each Ordinary Meeting, as likewise any letters or reports which may have been received, in presenting the necessary papers and documents to the Chairman, in sending notices to members of proceedings in which they are concerned, and in conducting any correspondence which may be directed by the Society. In performing these duties they are authorised to employ messengers, to prepay all postage, and to use printed forms.

MEETINGS OF THE SOCIETY.

13.—The Annual General Meeting of the Society shall he held in London early in December, and four Ordinary meetings shall be held in each year, namely (1) after the Annual General Meeting in December, (2) in February, (3) in May and (4) in or near the first week in October, the precise date to be determined by the Council; one of the four meetings to be held in the country at a time and place to be determined by the Council.

VISITORS.

14.—Members may introduce visitors to the Ordinary Meetings of the Society, but the same visitor shall not be introduced oftener than once a year. Every member shall sign the attendance book at each meeting, and in this book the names of visitors shall be entered together with the introducers.

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CHAIRMAN.

15.—The members present at the beginning of each meeting shall elect a Chairman by a show of hands.

SPECIAL GENERAL MEETINGS.

16.—A Special General Meeting shall be convened by the Council, either on the resolution of a majority of its own quorum, or on the written requisition of six members of the Society, whether members of the Council or not, a month's notice being given and the object of the meeting specified. No subjects shall be discussed at such meetings except those for which the meeting shall have been convened.

CONDUCT OF ORDINARY MEETINGS.

17.—Twenty minutes shall be allowed for the reading of a paper, and ten minutes to each speaker in any discussion which may arise.

ALTERATION OF RULES.

18.—No new rule shall be added and no existing rule shall be rescinded or amended except at a Special General Meeting convened by the Council, or on the requisition of at least six members, stating the precise nature of the addition or alteration intended to be proposed.

BYE-LAWS.

19.—The Council shall have power to frame bye-laws for the conduct of the Ordinary Meetings of the Society.

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LIST OF MEMBERS.

O.M. *signifies original member.*

		Elected
ABBOTT, C. E., M.R.C.S. ...	Shrapnells, Taunton.	1895
BLAGG, A. F., M.R.C.S., L.R.C.P.	6, West Mall, Clifton, Bristol.	1895
BRODHURST, B. E., F.R.C.S. Eng.	21, Portland Place, London, W.	O.M.
CLARKE, J. JACKSON, F.R.C.S. Eng.	9, Old Cavendish St., London, W.	1895
EWENS, J., L.R.C.P.	The Elms, Cotham Hill, Bristol.	O.M.
FREER, E. LUKE, M.R.C.S. Eng....	9, Newhall St., Birmingham.	O.M.
GRIFFITHS, C. T., M.R.C.S., L.R.C.P.	9, Newhall St., Birmingham.	1896
HOLLAND, C. T., M.R.C.S., L.R.C.P.	86, Princes Road, Liverpool.	O.M.
JACKSON, T. VINCENT, F.R.C.S.E.	Waterloo Road South, Wolverhampton.	O.M.
JONES, R., F.R.C.S.E.	11, Nelson St., Liverpool.	O.M.
KEETLEY, C. R. B., F.R.C.S. Eng.	56, Grosvenor St., London, W.	O.M.
LITTLE, E. M., F.R.C.S. Eng. ...	40, Seymour St., Portman Square, London, W.	O.M.
LLOYD, J. JORDAN, F.R.C.S. Eng.	Broad St. Birmingham.	1895
MORGAN, D., M.B., C.M. ...	46, Nelson St., Liverpool.	1895
MOXEY, V., M.R.C.S. Eng. ...	103, Fortess Road, Camden Town, London, N.W.	1895
MURRAY, R. W., F.R.C.S. Eng....	15, Rodney St., Liverpool.	O.M.
NEWBOLT, G. P., F.R.C.S. Eng....	42, Catherine St., Liverpool.	1895
NEWTON, R. A., F.R.C.S.E. ...	92, Newhall Street, Birmingham.	1896
OPENSHAW, T. H., M.S., F.R.C.S. Eng.	16, Wimpole St., Cavendish Square, London, W.	1895
POLAND, JOHN, F.R.C.S. Eng. ...	4, St. Thomas St., London, S.E.	1896
POWER, D'ARCY, M.B., F.R.C.S. Eng.	10A, Chandos St., Cavendish Square, London, W.	O.M.
RAWDON, H. G., M.D., F.R.C.S.E.	42, Rodney St., Liverpool.	1895
REEVES, H. A., F.R.C.S.E. ...	7, Grosvenor St., London, W.	O.M.
RIGG, S. E., M.R.C.S., L.R.C.P.	House-Surg., Royal United Hosp., Bath.	1896
SMITH, NOBLE, F.R.C.S.E. ...	24, Queen Anne St., Cavendish Square, London, W.	O.M.
SUNDERLAND, O., M.R.C.S., L.R.C.P.	Bexley Heath, Kent.	1895

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		Elected
SUNDERLAND, S., M.D., M.R.C.S. Eng.	11, Cavendish Place, London, W.	O.M.
SYMONDS, C. J., M.S., M.D., F.R.C.S.Eng.	26, Weymouth St., Portland Place, London, W.	1896
THOMAS, W. THELWALL, F.R.C.S. Eng.	75, Rodney St., Liverpool.	O.M.
THOMAS, W., F.R.C.S.Eng. ...	200, Bristol Road, Birmingham.	O.M.
TUBBY, A. H., M.S., F.R.C.S.Eng.	25, Weymouth St., Portland Place, London, W.	O.M.
WALSHAM, W. J., F.R.C.S.Eng.	77, Harley St., London, W.	O.M.
WARDEN, C., M.D., F.R.C.S.E....	9, Newhall St., Birmingham.	O.M.
WILLIAMS, G. C., M.R.C.S., etc.	1B, Bishopsgate St. Without, London, E.C.	1895

Corresponding Members—

DR. RIDLON	103, State St., Chicago, U.S.A.	1896
DR. V. P. GIBNEY...	16, Park Avenue, New York, U.S.A.	1896
DR. ROYAL WHITMAN	126, West 59th St., New York, U.S.A.	1896
DR. E. H. BRADFORD	133, Newbury St., Boston, U.S.A.	1896
DR. R. W. LOVETT	234, Marlborough St., Boston, U.S.A.	1896
DR. T. G. MORTON	1421, Chesnut St., Philadelphia, U.S.A.	1896

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BRITISH ORTHOPÆDIC SOCIETY.

SIXTH ORDINARY GENERAL MEETING.

Held at the MEDICAL INSTITUTE, EDMUND STREET, BIRMINGHAM, Saturday, May 30, 1896.

The day's proceedings commenced with a luncheon (by invitation of Mr. E. Luke Freer) at the Conservative Club, Temple Row, followed by visits to the New General Hospital, The General, Queen's, Children's, and Royal Orthopædic Hospitals. After dinner at the Grand Hotel (by invitation of the Birmingham members of the Society), the Ordinary General Meeting was held at the Medical Institute at 8.30 p.m., Dr. Warden being voted to the chair, eighteen members and visitors being present.

The CHAIRMAN (Dr. WARDEN) in opening the meeting, said:—"Gentlemen, you have already seen the programme of this afternoon's proceedings. My first duty is to welcome you here. We are very pleased to see you in Birmingham. We are sorry we have not had time to show you all our attractions, but we hope another time to have a better opportunity of exhibiting all we have to show you."

The minutes of the last meeting were read and confirmed.

Dr. RIGG, whose name was mentioned and approved at the last Council Meeting, was now proposed as a member of the Society by Dr. EWENS, seconded by Mr. TUBBY, aud duly elected.

It was resolved that a tender by Messrs. Hall and English to produce 1,000 copies of the Society's reports for £10 15s. be accepted. There was only a difference in price of £1 17s. 6d. between the tender for 100 and 1,000 copies. Each member would receive one bound copy and 20 unbound copies at a cost of 5s. to him.

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With the view of lessening the cost of production of the reports, a proposal was put forward to accept surgical and scientific instrument makers' advertisements in the publications of the Society. With one dissentient this was agreed to.

CONGENITAL TORTICOLLIS. CONGENITAL ABSENCE OF METACARPUS AND PHALANGES. CONGENITAL DISLOCATION OF HIP (DOUBLE).

By Mr. William Thomas.

Mr. William Thomas showed the first case, which was one of congenital torticollis. This was followed by a case of congenital absence of metacarpus and phalanges, respecting which he remarked that it was one of those peculiar conditions which are uncommon. In the left hand the metacarpus was practically deficient; nearly all the first phalanges were deficient with the exception of those of the thumb. The second phalanges were also absent, also the terminal phalanges. The cause of this condition was ascribed to fright. The next case shown by Mr. Thomas was one of congenital dislocation of hip (double).

Mr. Openshaw then referred to the case shown by Mr. Thomas, that of congenital dislocation of hip (double), and remarked that it was especially interesting, inasmuch as the waddling was more than he had previously observed in any double case. He remarked that although he strongly advised Lorenz's operation for reposition of the head of the bone in suitable cases of unilateral congenital dislocation, yet in cases of double congenital dislocation he would hesitate to resort to the open method for several reasons: first, that there is little or no tendency to lateral curvature in double cases, that the lordosis tends to undergo improvement with age, that the necks of the femora are often unequally curved, and lastly, because should both hips become ankylosed after the operation the condition of the patient is aggravated rather than improved.

CASES OF SEVERE RELAPSE AFTER TARSECTOMY FOR DOUBLE TALIPES EQUINO-VARUS.

By Mr. E. Luke Freer.

Mr. Luke Freer showed a case of severe relapse after tarsectomy for double talipes equino-varus. He explained that this case was a legacy left to him; he had not seen the case

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till it was brought to the hospital a fortnight ago. Both feet of the patient had been tarsectomised, and this was the brilliant (?) result. It opened up the question, what was to be done when tarsectomy had failed to be satisfactory? The patient had been operated on three times. He was going to treat it by tenotomy and wrenching, and hoped to be able to report progress at a future meeting. Mr. Freer followed with the case of a child with talipes equino-varus. This case he was treating with tenotomy and wrenching. It was ascertained that another child of the same parents was born in a similar condition, and that the father himself had a foot incurved.

CONGENITAL DEFORMITY OF LEG AND FOOT.

Case by Dr. C. Warden.

The next case, that of a child with congenital deformity of leg and foot. Dr. Warden described it as an uncommon case of bony deformity.

SEVERE ACQUIRED LATERAL CURVATURE OF THE SPINE.

By Mr. William Thomas.

A case was brought forward by Mr. William Thomas, which that gentleman described as an unusual one, it being a severe acquired lateral curvature of the spine, and it was the more uncommon as it had occurred in a strong male adult. The subject, a man aged 30, had been engaged in laborious work since 11 years of age; he had already been under the care of surgeons in other institutions, and came into Mr. Thomas's charge some months since.

It was suggested by Mr. Thomas that the curvature in this case, occurring as it did in a man following the employment of an iron moulder or caster, was the effect of his having had to carry ladles of molten metal. The curvature was on the left side, which it was ascertained had been subject to the strain owing to the ladle being mainly supported by the left hand.

Before coming under Mr. Thomas's care, two plaster cases had been put on the patient, one after another, but without effect. He had since, under Mr. Thomas's directions, been almost daily thoroughly massaged in addition to other treatment, but there did not seem to be much improvement. The difficult part of the case was getting at the primary symptoms.

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The case was one of extreme lateral curvature, and the patient felt intense pain in doing any work at any time.

DISCUSSION.

On the invitation of the Chairman, Mr. KEETLEY said he would endeavour to briefly give his views of Mr. William Thomas's case, described as one of severe acquired lateral curvature. It was a form of what had been called "ischias scoliatica." It belonged to a class which, in his opinion, was essentially reflex. Mr. Keetley held that the man had nothing the matter with his spine. The great pain he had suffered was in the distribution of nerves which were frequently the seat of pain in cases of spinal caries; but sciatica and a lateral curvature in the lumbar spine were far from establishing a diagnosis of any spinal affection. It sometimes resulted from hip disease; but this man's hip also appeared to be sound. The primary conditions varied in this class of cases; but the essential condition was that something was wrong with the sciatic nerve, either neuralgia or chronic inflammation, possibly of gouty or rheumatic origin.

In such a case he would recommend rest in bed, with a strictly regulated diet, and afterwards the alternation of rest with moderate exercise on the tricycle or bicycle, or the "home trainer."

Mr. THOMAS, in reply, said that it seemed to him very singular to say there was nothing the matter with the man's spine when actually there was lateral curvature, well marked scoliosis. What it really was, of course, was open to criticism. What he, however, would put to Mr. Keetley was the question, would he recommend stretching of the sciatic nerve? Did Mr. Keetley remember having seen any ordinary case of sciatica which had well-marked curvature, that is, from sciatica itself? He did not think that during the time he had sciatica he (Mr. Thomas) had any tendency to curvature of his spine. In replying thus to Mr. Keetley, he would like to express the pleasure he had felt in this controversial discussion in view of the benefit and the hopeful results to which it might lead.

LEFT DORSAL CURVATURE.

By Mr. E. LUKE FREER.

The next case was one shown by Mr. E. LUKE FREER, and was that of a man with a left dorsal curvature. The patient had suffered from torticollis since quite a boy (he was now about 30).

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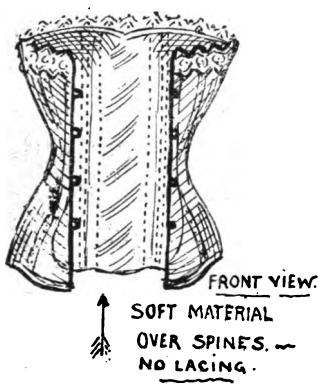
ORTHOPÆDIC INSTRUMENTS.

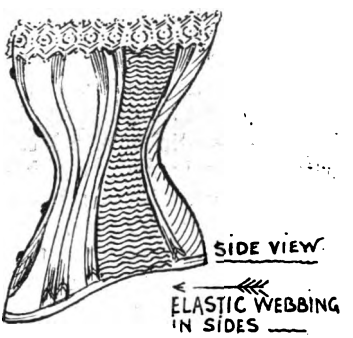
SHOWN BY MR. E. LUKE FREER.

Mr. FREER exhibited one of Thomas's knee splints adapted as an artificial leg and having an imitation calf and padded foot. Observing that this specially adapted knee-splint was made for a poor girl, Mr. Freer remarked how much patients preferred these splints to an ordinary artificial leg, unless the article were an expensive one costing fifteen or twenty guineas.

Mr. Freer next showed some splints made of aluminium, for the after-treatment of talipes, which were flexible and light, and had been sent to him by Dr. Oliver Sunderland (a member of the Society) for exhibition.

Mr. Freer next showed a modification of ordinary corsets having elastic sides. He recommended them for general wear, but especially in cases of curvature. The special points about them were elastic down each side allowing full costal breathing, a soft space of three inches between the busks behind over the spine and no laces. Numbers of cases had been sent to him by surgeons who thought the subjects had extensive caries—these were nothing more than periosteal inflammation as the result of pressure from whalebones, steels, laces, buttons, &c., causing friction over naturally prominent spinous processes in thin atonic girls.





A small plate of steel carrying a toe-post, movable in a slot, designed by Mr. Bernard Haseler, instrument-maker of Birmingham, was shown by Mr. Freer; it had merely to be placed in the toe of the boot. It served in a satisfactory manner for cases of hallux valgus.

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RECRUDESCENT RICKETS.

Case by Mr. Robert Jones.

The case I am about to relate is, I think, best described as recrudescent rickets, although I am unable to derive sufficiently decisive history of an infantile attack. She is a girl of 16 years, and was admitted into the Southern Hospital a few weeks ago. Her family history is good. She is the second of four daughters, and her sisters are of moderate physique, strong, and free from deformity. She passed an uneventful childhood, and there was never any suspicion of rickets. At the age of seven she felt rather poorly, and was ordered change of air, and on her return, twelve months later, it was noted she had developed knock-knee. She had no fever, nor any particular ailment when first attacked, but since the genu valgum appeared her back has been painful. Up to two years ago she was able to walk comfortably, but since then her symptoms have been much aggravated, and she has been quite unable to stand or walk. She has always been a dainty feeder, and is said never to have made a good meal.

On examining her it is found that the left parietal bone is slightly flattened, so that the head is asymmetrical. The sutures are closed but the sulci are well marked, especially that between the frontal and parietal bones. The palate is arched, and all the teeth, except the wisdoms, are present. The lower jaw is thickened at the angles and pointed at the chin. The circumference of the head is 20½ inches. The chest is somewhat barrel-shaped, the ribs are beaded, and Harrison's sulcus is marked. The heart and lungs are normal. There is also some rib deformity, due to a slight lateral curvature. The abdomen is large and prominent; the abdominal muscles are flabby. In addition to a lateral curve to the left there is very marked lordosis accompanied by rigidity. The angles of the scapulæ are prominent; there is nothing very noticeable about the clavicles nor humeri. The radii are enormously thickened at the lower end, so that the appearance is somewhat that of a very bad Colles' fracture. Supination is much interfered with, pronation to a slighter degree. The arms are very thin and poorly developed, but she has a fairly good grasp. The pelvis appears to be normal; there is considerable enlargement of the lower end of the femora, and the internal condyles are very prominent and elongated, so that on extension of the limbs there is exceptional knock-knee, the leg forming an obtuse angle of 135 degrees with the thigh. This deformity is more marked on the left than on the right side. There is

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also flexion deformity at the knees, and it is impossible to get the legs perfectly extended. Flexion is perfect, and then the knock-knee disappears. Further, there is flexion deformity of 25 degrees at the hips. The feet are in varus position, and this is due to an acute bend at the lower end of the tibiæ just above the ankle joint, and also to a great thickening at the lower ends of the fibulæ. The sacrum is curved and prominent.

The child is very stunted in growth and small for her age, and ill nourished. She is fairly intelligent, but cannot walk nor stand at all.

There is $\frac{1}{6}$ albumen in the urine.

Attention has been drawn in this country to either late or recrudescent rickets, by Drewitt, Clutton, Lucas, and others, and the rarity of the condition has been generally admitted. I am convinced, however, that its rarity is overstated. Without being able to verify the precise number I have certainly seen between twenty and thirty cases. In most of these the lower extremities are alone affected. In some, as in the present case, the head, chest, and upper extremities participate in the deformities. In all, the enlargements are more or less shared by the epiphysial ends of bone. They therefore differ from the cases of Clement Lucas in the fact that the deformities are not confined to the shafts of the bones. Clutton, in the description of his case, draws attention to the fact that the shafts of the bones of the forearm were not bent, and this was another confirmation of the fact that the upper limbs bend in infantile rickets from the inability of the little patients to assume the erect position. In the case I report the forearms are characteristically bent, the deformities starting long after the patient had ceased to crawl. This bears out several observations I have made with regard to the etiology of knock-knee; the deformity characteristic of rickets arising and developing while the patient remained in bed. In none of the reported cases do I note any reference to flexion-deformities at the hip and knee, symptoms which I have frequently observed.

From my experience I should conclude that—(*a*) late rickets is generally recrudescent. (*b*) That epiphysial enlargements are an essential feature; (*c*) That while static influences bear an important part in the production of the limb deformities they are not essential factors. (*d*) That, in addition to the common deformities of rickets, flexion deformities are found in the hip and knee, and frequently limitations of movement in other joints. (*e*) That, contrary to the experience gained from the cases of Clutton, Pitts, and others, the skull and face may exhibit rachitic deformities. (*f*) That the sacrum generally presents an angular projection about its middle.

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Mr. KEETLEY, speaking on behalf of the invited members, moved a hearty vote of thanks to the Birmingham members for the extremely kind way in which they had been received, and for the excellently hospitable arrangements that had been made for them, and for the opportunity they had had of seeing some interesting cases.

The CHAIRMAN having again expressed the pleasure it had given the Birmingham members to entertain the visitors, and the Chairman having been thanked for officiating, Mr. E. LUKE FREER moved a vote of thanks to the Committee of the Medical Institute for the use of the commodious room which had been placed at their disposal, and the proceedings then terminated.

SEVENTH ORDINARY GENERAL MEETING.

Held at the NATIONAL ORTHOPÆDIC HOSPITAL, GREAT PORTLAND STREET, LONDON, W.

Saturday, October 10, 1896.

Fifteen members were present and Mr. OPENSHAW voted to the Chair.

Tea and cigarettes were provided.

The minutes of the last meeting were read and confirmed.

On the motion of Mr. D'ARCY POWER, seconded by Mr. EWENS, the following were elected ordinary members:—Charters J. Symonds, M.S., F.R.C.S.; C. T. Griffiths, M.R.C.S., L.R.C.P.; R. A. Newton, F.R.C.S.

The following were elected honorary corresponding members on the motion of Mr. NOBLE SMITH, seconded by Mr. MUIRHEAD LITTLE:—Dr. Ridlon, Chicago, U.S.A.: Dr. V. P. Gibney, New York, U.S.A.; Dr. Royal Witman, New York, U.S.A.; Dr. E. H. Bradford, Boston, U.S.A.; Dr. R. W. Lovett, Boston, U.S.A.; Dr. T. J. Morton, Philadelphia.

CONGENITAL DISLOCATION OF THE HIPS.

CASE BY MR. NOBLE SMITH.

Mr. NOBLE SMITH described the following case:—Ten years ago a child, aged 2 years 2 months, was brought to him with obvious dislocation of the hips. He found (as in other children about the same age with the like deformity) con-

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siderable freedom of movement of the heads of the bones in their false positions; but on drawing the heads downwards there were distinct bony obstructions to their reaching their natural position—obstructions such as he had not noticed in other cases with the same freedom of movement. In children of, say, from 7 to 10 years of age the conditions he had generally found varied from great firmness of the parts to great laxity. Where there had been great laxity he had always been able with a little stretching to pull down the heads of the femora either near to, or absolutely to their natural position. In this case, therefore, finding such a difficulty and also judging from the general appearance of the parts, the width of the hips, and other facts, he ventured the opinion that it was not an instance of ordinary congenital dislocation in which the acetabula were hardly formed at all, or were more or less shallow and the heads of the femora malformed, but that it was a case in which dislocation had taken place at the time of birth. On inquiry into the history he found there had been a breech-presentation, great difficulty in delivery, very prolonged parturition, and that instruments had been used—all contributing to confirm his view of the nature of the case. He had advised that an attempt should be made under chloroform to reduce the heads. Other surgeons were consulted who gave it as their opinion that such a course would be absolutely useless, arguing that the case was one of ordinary congenital dislocation, and that the heads of the bones if pulled down would not remain in position. The parents, consequently, had nothing done. Eight years later the child was brought again to him very much deformed, with much lordosis and much difficulty in getting about. With the view of counteracting the lordosis he had applied a supporting apparatus reaching from the buttocks to the shoulders with an abdominal belt, and the child got on very well, steadily improving in her general figure. He had lately had a skiagram of the hips taken, and so far as he could see the heads of the femora were perfectly natural—that was the case certainly on one side—and the acetabula were apparently well formed, bearing out the opinion he had formed in the first instance. Of the skiagram he exhibited a photograph. It showed acetabula of a form different from that of any he had seen in ordinary cases of congenital dislocation. To illustrate this point he exhibited (in conjunction with Mr. Chisholm Williams) two cases of ordinary congenital dislocation. In the first of these cases there was a certain amount of upward displacement of the femora. In the second both heads could be brought down to their natural position, there being no great obstruction upon firm traction being applied.

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A CASE OF DOUBLE CONGENITAL DISLOCATION OF THE HIP.

By Mr. A. H. Tubby.

Mr. A. H. Tubby showed a skiagram of double congenital dislocation of the hip, with right dorsal, left anterior displacement. In this case he had divided the adductor and trochanteric tendons on both sides, and had then succeeded in bringing the heads of the femora into good position by the manœuvres of Paci.

DISCUSSION.

Mr. D'Arcy Power asked what Mr. Noble Smith's experience in connection with these cases of congenital dislocation was. He supposed there was no doubt many of them were congenital, and a few—quite the minority, he fancied—were associated with injury at the time of birth. Mr. Noble Smith had, he presumed, shown them one of the rarest of the rare specimens. Mr. Adams,* a few years ago, had tabulated a large number of such cases, but could not convince himself that any had been associated with injury at birth, and for that reason Mr. Noble Smith's case was specially interesting. He would like to know whether Mr. Noble Smith had met with many other cases of the same kind.

Mr. Noble Smith: "None whatever; its great difference from any other led me to speak of it." Mr. Tubby's case showed a very different pelvis. His own case was that of a patient aged 12, while Mr. Tubby's was 7. On the right side of the photograph, which he took to be the left of the patient, there was a great deficiency of thickness in the neighbourhood of the acetabulum. On the other side more of the acetabulum was to be seen.

The question of treatment was one of great importance. He thought it might be said that surgical opinion at the present day was adverse to heroic operations for making acetabula. Some deaths had occurred from these operations, and even the successful cases were not perfect in their results. He had not yet thought himself justified in attempting such operations, because by perfectly safe procedures much might be done for the patients to enable them to walk about comfortably. With regard to the muscles, Lorenz had pointed out that the internal rotators were not really shortened, and that section of them was absolutely wrong in practice. They were rather lengthened than

* *The British Medical Journal*, ii., 1885, p. 861.

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shortened. The adductors he (Mr. Noble Smith) had generally found shortened, and in the case to which he had referred, he was going to attempt something to relieve this. He proposed in the first instance to divide the muscles which were obviously obstructing extension. The tensor vaginæ femoris and the adductors were tight. After dividing these tightened structures he would draw down the bones as far as he could, apply long splints with perineal bands, and endeavour to stretch the parts as far as possible for at least some weeks, and be guided by the result. If then he could find any other tight structures these would also be divided. If after thorough stretching the parts seemed more lax, he proposed to make an attempt under chloroform to bring the heads of the bones down to the acetabula, and try to retain them there. With regard to the treatment of cases generally, he had up till now acted upon a certain plan. If a child of, say, six or seven years of age were brought to him with the joints very loose, so that the bones could be pushed in any direction, he advised rest. The patient would undoubtedly get worse if he continued to walk about. Lordosis would develop, and much shortening of the lower limbs would occur. In such a case, where recumbency was so desirable, he also advised extension for an indefinite period. He had adopted Buckminster Browne's plan of a two years' extension with distinct benefit. In a child with great looseness of one joint he reduced the femur by such means into practically its natural position, and as the dislocation was only on one side he had the opportunity of judging as to the improvement by comparison. The affected leg was two inches short to begin with, but at the end of two years' treatment there was less than ½ in. of shortening, and even when pretty firm pressure was applied to the femur it did not seem to return at all towards its original position. He believed that Buckminster Browne's case relapsed, but even if his case did relapse there had been a distinct gain from the treatment, because during the two years the child had been free from suffering, and doubtless was saved from becoming very much worse.

When the joints were not so loose Mr. Noble Smith adopted another plan of treatment. He simply supported the child by means of the apparatus already referred to, with a band round the pelvis attached by a bar to a pad between the shoulders with shoulder straps, and a belt to correct the lordosis. By that means the lumbar spine could be brought back to a considerable extent, and such cases did very well.

With regard to questions of operative interference, it seemed to him a large subject worthy of further consideration.

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Mr. TUBBY, referring to Mr. Noble Smith's remark that Lorenz had found retraction or contraction of the muscles attached to the great trochanter, pointed out that Hoffa distinctly stated the contrary. He imagined that the real truth lay between the two statements—that in some cases there was, and in others there was not, contraction of these muscles. In the case he had shown, after dividing the adductors, the difficulty of bringing the heads of the femora into position was really due to distinct contraction on the part of the muscles attached to the great trochanter, which he accordingly divided. He thought the whole question of the general treatment of congenital dislocation of the hip was so far absolutely chaotic. On the one hand they found certain German surgeons making statements which they believed to be true; but they also found cases coming over from Vienna, where they had been operated on, deficient in some particulars—either the lordosis remained or the waddling remained, or there was anchylosis. A case of anchylosis had come under his own notice. The patient had been under his care, but had been taken to Lorenz in Vienna. After nine months, for six of which the patient had been under treatment, a somewhat triumphant report was sent, but in the letter written to him, one very important fact had been suppressed—a fact readily discovered when the child was examined, namely, that the hip was anchylosed. An operation of this kind, which, after all, resulted in an anchylosed hip, could not be considered a great success. A better solution might be found, but it seemed to him that so far as they had discovered, a solution of the question lay in the treatment at present adopted by Paci, namely, to get the head into the best possible position after subcutaneous division of the tendons. Hitherto he had been not a little disappointed, although he had had three successful cases within a period of one year; but it seemed to him that Paci's treatment opened out the best opportunity. One point appealed to him very strongly, namely, that Professor Lorenz had abandoned in children under seven treatment by the open operation, and now reverted to the measures of Paci. So far as the treatment of congenital dislocation was concerned, that seemed to him the best at present, but he did not believe the last had been said about the matter. Hoffa's operation had fallen into considerable and justifiable discredit. Lorenz's operation had commended itself to surgeons because it was the least wide, and had the same effect as Hoffa's; but he must say that nothing had occurred so far to convince him that it was possible so to hollow out an ill-developed acetabulum as to

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make it large enough to retain the head of the femur within it in all possible positions without perforating the acetabulum or doing some serious damage to the bone itself. Kirmission had had three deaths after the attempt. If the acetabulum was of a triangular shape, or if the cotyloid rim was insufficient, it seemed to him impossible to hollow it out without real danger. Dislocations produced at birth from a normal acetabulum were not in any sense congenital. The only true congenital dislocations of the hip were those where the cotyloid rim was deficient, or the acetabulum was developed from two instead of three segments of the iliac bone. He was sceptical as to the possibility of forming a normal acetabulum from a triangular, ill-developed, shallow acetabulum.

Mr. KEETLEY asked how it was they heard so much about these German operations and nothing about Ogston's for congenital dislocation of the hip, which seemed to him as scientifically conceived as any of the others, though he spoke with diffidence from want of practical experience. The essence of Ogston's operation was the removal of a piece of bone involving the whole thickness of the os innominatum. Scooping out an artificial acetabulum or deepening a too shallow acetabulum certainly did sometimes less good than it should, because the tendency of a hole made in that fashion was to fill up again. There was, however, not much tendency to fill up with anything but fibrous tissue in the case of a hole made in the skull or in the os innominatum, and that was the scientific basis of Ogston's operation, in whose hands it had produced very good results. As for the possible origin of these cases, he did not believe they were congenital at all. He was not referring to the particular cases shown there, but to what were generally called congenital dislocations of the hip. The mothers of these children never seemed to acknowledge having noticed anything wrong until the child was some years old. Mr. Power in conversation had said three years; he himself would say that was the earliest. If the dislocation depended upon something congenitally wrong he would have expected the hip to have gone wrong long before that, because the younger the child was and the less experienced in walking, the more it struggled about, and the more accidents it had the more likely would be the hip to slip out. It was not necessary for the hip-joint to be anatomically wrong for it to slip out very easily. What numbers of cases there were of what were called "pathological" dislocations of the hip and *known* to be pathological. Thus persons, perfectly sound otherwise, went to bed with, say, typhoid fever, and to

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the astonishment of everyone two or three months afterwards were found to have a dislocation of the hip. Certain cases, too, occurred in persons who had previously suffered from infantile paralysis which had almost a photographic resemblance to congenital dislocation of the hip, from which he defied anybody to distinguish them, apart from the fact that the patients are known to have had infantile paralysis. Of course Verneuil had said all these cases were the result of infantile paralysis, but that was going rather too far. He thought, however, that they would be quite justified in saying when the patient had obviously had infantile paralysis, having a wasted limb and talipes varus, the dislocation was one arising from infantile paralysis; while if there were no such symptoms present it was possibly paralytic, but might also possibly, or even probably, be due to some other pathological cause. If anybody else were in the same frame of mind as himself about orthopædic treatment in general, namely, of a strong sceptical turn of mind, and inclined to disbelieve in the results anyone else got except what he saw with his own eyes, he would support him in advocating something of this kind. When a patient was brought before the Society, such as the excellent cases Messrs. Noble Smith and Williams had exhibited, that ought to entitle the members to know what ultimately became of these cases as far as the person showing them could give information. He thought the Secretary ought to be permitted to take the name and address of the patient and to take notes of his condition as he saw the case at the time. These notes ought, of course, to be courteously shown to the person in charge of the case; and from time to time the Society ought to have the opportunity of seeing that same case, and of gaining some clear idea of what the effect of different modes of treatment really was.

Mr. OPENSHAW thought that was a suggestion with which they would all agree.

Mr. THOMAS said that, although he could enjoy to the full the calm delight every right-minded surgeon felt when he had restored order to a member which had been out of condition, he was bound to say that so far as so-called congenital dislocation of the hip was concerned he had foregone that pleasure altogether, simply because he had never yet seen a case which he thought by any surgical procedure could be rendered much better than it was—better, that was, for use and for walking. It seemed to him that by the time these cases came under their notice, the head of the bone, such as it was—and of course they had to consider the head of the bone such as it was and the

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acetabulum such as it was—had undergone such changes that it would be impossible to hope that any attempt at replacement in the original socket would be attended by any advantage. To begin with, there was the long time occupied by the treatment, the very great risk of relapse and the possibility of anchylosis. It was a very great question whether it was not well in some of these cases to leave them to scoop out for themselves new acetabula and to teach them to use them to the best advantage. In his early days it used to be a rule that when a bone had become dislocated, the humerus, for instance, and a certain interval having elapsed there was a fair amount of movement, it should not be interfered with. He believed that to a large extent this held good with regard to these congenital dislocations. A great many of them walked fairly well. Certainly their gait was not elegant, and they were weak; but it was a question whether any greater walking power would be secured by any operation than by their own unaided natural efforts. As to the time at which these dislocations were generally discovered, he believed with Mr. Power that it was generally at about three years of age. He had seen but one case of pathological dislocation, and that was associated with a history of acute rheumatism; while one of his colleagues had a case of simple dislocation.

Mr. J. EWENS said he understood Mr. Keetley to say that the dislocation might result from some pathological condition such as softening of the ligaments.

Mr. KEETLEY said he had not advanced any theory about softening of the ligaments.

Mr. EWENS, continuing, said that some years ago he had a case where dislocation of the left hip joint on the dorsum ilii followed an attack of scarlatinal rheumatism. From the position in which the child lay for a considerable time the head of the bone got distinctly displaced without any sign of abscess having formed in the joint. He divided the neck of the femur and got a very good result with movement. He was inclined to think that rheumatism was a cause to which many of these cases might be traced. He thought it rather fortunate when both femora were congenitally dislocated instead of one, for then the peculiarity in the walk of the child was not so noticeable.

Mr. OPENSHAW said that in his experience of these cases the head of the bone did not become deformed until after the age of four years, and then it got bevelled off behind as a result of the posterior surface of the head of the bone resting upon the ilium. Further, if the dislocation be double, the neck of

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the femur on one side was often twisted forwards, so that there appeared to be anterior dislocation on one side, posterior on the other. He had seen these cases in association with genu recurvatum, and his idea was that it was due to mal-position in utero, and consequent mal-development of the acetabulum. In six cases upon which he had operated he had found the acetabulum in each case triangular, and about one-third of an inch in depth. The acetabulum was present in each case, and in none was it filled up. The obstruction to reposition was due to a thickening of the posterior and upper edge of the acetabulum and of the cotyloid ligament; and his experience would lead him to believe that in no case after three years of age was it possible to manipulate the head of the bone through the contracted capsule into the acetabulum. He had no doubt that no matter how well the head of the bone was brought opposite the gap in the acetabulum or how much it was sought to retain it there, the tendency to relapse would be great. He had himself deepened the acetabulum six times and in no single case had he perforated its base. In only one of these six had the head of the bone slipped out of the acetabulum after it had been so deepened. In each case there had been a rudimentary, triangular, shallow acetabulum present. Moreover, in his opinion it was absolute nonsense to talk of deepening the acetabulum by subcutaneous methods. It was difficult enough to reach and deepen the acetabulum when by an incision 4½ to 5 inches long from the anterior superior iliac spine downwards along the anterior border and a horizontal incision at right angles to this along the top of the great trochanter the deeper parts are to some extent laid bare.

CASTS OF A CASE OF DOUBLE TARSECTOMY.

By Mr. J. Ewens.

Mr. J. Ewens showed casts of a case of double tarsectomy before and after operation. It was the worst case he had ever seen. The patient was a boy about 8 years of age. He had operated in the ordinary way by taking a wedge from the outside of each foot. The boy after the operation went to the country, where he was very much neglected, so that when he returned there was a considerable amount of equinus of the left foot, and in the right foot some varus. A wedge was then removed from the dorsum of the left foot. When he left the hospital the feet came down very well. The left foot was in a very satisfactory condition, the right had still an inclination to incurvation; but with care he hoped eventually to secure a very

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good position.* His experience differed from that of some other observers in respect that almost all the cases on which he had operated had talipes equino-varus in *both* feet. Of twenty-one cases recorded by Mr. Davy in only one was the talipes single. He had himself operated on something like twenty cases, the result of the tarsectomy being very satisfactory. A child on whom he had operated eight years ago was now walking perfectly well with good movement of the feet and ankles; and other cases of his were in a very satisfactory state as to shape and power of feet.

CASES OF CONGENITAL CLUB FOOT, HALLUX VALGUS AND CONGENITAL ABSENCE OF RADIUS AND THUMB.

SHOWN BY MR. MUIRHEAD LITTLE.

Mr. E. MUIRHEAD LITTLE showed skiagrams, one of a case of aggravated congenital club foot in an adult not yet treated, one of hallux flexus, and one of congenital absence of the radius and thumb.

DOUBLE TALIPES EQUINO-VARUS.

CASE BY MR. MUIRHEAD LITTLE.

Mr. LITTLE also showed a patient who was admitted with double talipes equino-varus. The case was one which had apparently been tarsectomized at another hospital. He presented photographs of the feet on admission. These showed that the adduction had been fairly well overcome, but that there were marked equinus with rotation outwards, and a remarkable bony projection on the outer side of the dorsum of the right foot as shown in the photograph, which also showed the nearest approach to flexion of the ankle joint that was possible. Neither heel could be brought within two inches of the ground. The previous imperfectly successful operations had left the feet so resistant, that subcutaneous operations and instrumental treatment and the wrench failed to produce much improvement. Mr. Little therefore performed Phelps' operation on the right foot and that of Bradford on the left foot, removing a wedge through the neck of the astragalus and the os calcis in the same way as in his case shown at the first meeting of the Society.

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* On May 28, 1897, I saw this boy walking quite well and evenly on a railway platform, both feet being in a most satisfactory condition.— J. E.

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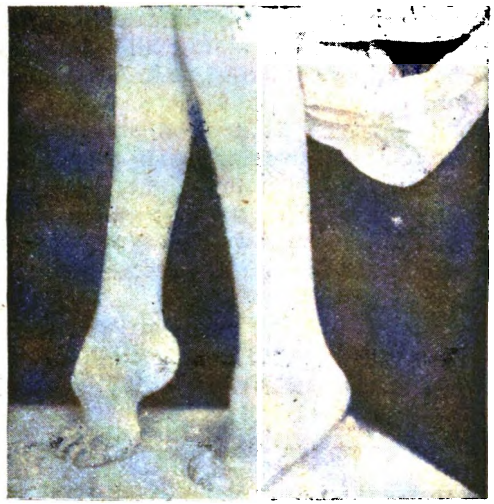

FIG. 1.—FEET BEFORE OPERATION. SIDE VIEW.

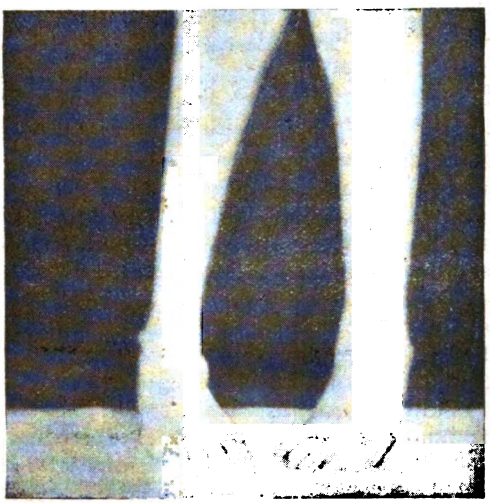

FIG. 2.—FEET BEFORE OPERATION. FRONT VIEW.

The patient was now able to put her feet flat on the ground when erect, and walked a little.

Figures 1 and 2 show the condition on admission. Figures 3 and 4 show the case as in July, 1897. Now there is no relapse in varus, but some relapse *quâ* equinus. She walks well.

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FIG. 3.—FEET AFTER OPERATION.

FIG. 4.—FEET AFTER OPERATION.

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DISCUSSION.

Mr. NOBLE SMITH thought the result so good in the case shown by Mr. Little at the former meeting (in which there were undoubted difficulties which could not have been successfully treated otherwise) that he was reluctant to offer any remarks that might seem in the nature of adverse criticism. However, he must say that he could not see why such a case as had just been described would not have been equally benefited by section of the plantar fascia and the use of Thomas's wrench and tenotomy. In the previous instance referred to, obvious benefits had accrued, but such a result was unusual after tarsectomy. A rigid ankle and foot very commonly resulted, but in the case shown by Mr. Little there were movable and satisfactory joints.

Mr. LITTLE said that for several months he had tried the ordinary subcutaneous treatment, dividing the plantar fascia and tendo Achillis with very little improvement. He had also tried the wrench; and considering that tarsectomy had apparently been previously performed and he could get no improvement, he felt justified in operating upon the bones again on one foot and in performing an open operation on the other.

Mr. KEETLEY said that the good result in the case of the foot that had been tarsectomised seemed to him to be due to the fact that the astragalus had been dealt with. He did not think it was possible to get a really satisfactory result otherwise. That in a general hospital in London tarsectomy should be done and not produce a very wonderful result was not surprising, especially considering that still in many places students were taught first to rectify the varus and then the equinus, just as if they were two absolutely distinct cases, whereas they were not distinct. The astragalus, no doubt, took a very active part in producing both. It was obviously impossible to rectify first the varus and then the equinus. One had only to put such a child on one's knees to see how much of the varus was in the immediate neighbourhood of the ankle joint. In the case of the foot not tarsectomised there was still an enormous amount of varus in the ankle joint; the surface of the calcaneus was turned quite inwards, the explanation being that a transverse section of the astragalus represented more or less a wedge shape. As to the foot that had had Phelps' operation performed on it, he did not see why the skin should have been divided transversely. It ought to be a universal rule in surgery that when a longitudinal incision is possible it should be preferred. He would

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ask Mr. Little whether Phelps had not described his operation as one with a straight incision.

Mr. LITTLE said he was afraid he was unable to answer the question.

Mr. THOMAS opened a discussion on "The Early Diagnosis of Disease of the Spinal Column."

Mr. NOBLE SMITH said the subject was a very large one, and it was impossible at such a late hour to discuss it adequately. He proposed that the discussion be deferred until it could be dealt with at greater length.

Mr. TUBBY supported this proposal, suggesting that the transcript of the shorthand report be sent to Mr. Thomas for his revision and the addition of such points as he might think desirable, so that it might then be printed and distributed to the members as the basis for the discussion at the next meeting. They were all indebted to Mr. Thomas for his able remarks and for the concise way in which he had put the matter before them. Personally he was indebted to Mr. Thomas for information on the subject.

Mr. THOMAS having placed himself in the hands of the meeting, the proposal was agreed to.

SECOND ANNUAL MEETING.

Held at the CITY ORTHOPÆDIC HOSPITAL, HATTON GARDEN, LONDON, Friday, December 18th, 1896.

Mr. NOBLE SMITH was voted to the chair. The minutes of the last annual meeting were read and confirmed.

Mr. John Poland, F.R.C.S., was balloted for, and duly elected, a member of the Society.

The following members of the Council retired by ballot: Messrs. Walsham, Ewens and Noble Smith.

The following members were elected to the Council: Messrs. Blagg, Symonds and Jackson Clarke.

The Treasurer's report was submitted, but its consideration was deferred until a complete balance-sheet could be presented with the cost of the TRANSACTIONS included.

The Secretaries' report was read and adopted.

After a discussion with respect to the dates and number of meetings held each year, in which it was pointed out that

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during August many members were unable to attend, and that only three meetings yearly would not afford sufficient material for publication in the TRANSACTIONS, the Secretaries gave notice of a motion to alter Rule XIII., so as to provide for four meetings per annum, to be held in October, December (General Meeting), February and May (Provincial Meeting).

It was agreed to continue holding the meetings on Friday as the most suitable day.

Mr. D'ARCY POWER proposed a cordial vote of thanks to the Editors of the TRANSACTIONS who had issued their first volume. They had been at much trouble in its preparation, and to Mr. Luke Freer especially their very hearty thanks were due.

Mr. FREER acknowledged the vote and expressed the pleasure with which the Editors learned that the TRANSACTIONS had given satisfaction.

HON. SECRETARIES' REPORT.

Your Hon. Secretaries are pleased to have to report the satisfactory work done by the Society during the past year. A Society devoted exclusively to a special branch of practice must necessarily have a somewhat limited membership, but it is pleasing to state that four new members have joined, and it is an additional satisfaction to note that a bond of fellowship with our American *confrères* has been formed by the election as Hon. Corresponding Members of such eminent American orthopædic surgeons as Drs. Ridlon, Whitman, Morton, Bradford, Lovett and Gibney, whose names are known to all of us as members of the American Orthopædic Association.

It is with the most sincere regret that they have to record the death of a well-known and respected member of the Society, Dr. N. Grattan, of Cork, and your Council desire to express their most heartfelt sympathy with his widow and family in their bereavement. He was one who devoted himself most fully to orthopædic work, and to quote his own words, "he has gone to seek the rest of a poor orthopædic surgeon."

One member has resigned, making the total number of ordinary members at the present time 33.

Three Ordinary Meetings have been held during the year, two in London and one in Birmingham, and at each there have been most interesting discussions, in addition to the exhibition of numerous clinical cases and specimens.

The Provincial Meeting in Birmingham was most thoroughly enjoyed by all who were able to attend. The visitors were first

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entertained at luncheon at the Conservative Club, by Mr. Luke Freer, after which they drove round to the New General Hospital, the present General Hospital, the Birmingham Royal Orthopædic Hospital and the Queen's Hospital. The visit to the New General Hospital, which is fast approaching completion, was most interesting, the architect, Mr. Henman, accompanying the visitors, and explaining most lucidly the novel and apparently most efficient method of ventilation which he purposed adopting. After dining together at the Grand Hotel, by invitation of the Birmingham members, the Ordinary Meeting was held at the Medical Institute, where a large number of interesting cases had been collected.

The arrangement of having a Chairman elected by the members at each meeting instead of a permanent President, has been found to work admirably, and your Council are of opinion that for a small Society such a procedure adds considerably to the social character of the meetings.

One difficulty that your Society has to contend with is the dates of the meetings; it will be remembered that last year the Provincial Meeting was held in May; as the British Medical Annual Meeting taking place in London, it was thought desirable to hold that of your Society at the same time. This year the meeting that should have been held in August had to be postponed till October, in consequence of London members being out of town. The arrangements for the forthcoming year have received your consideration, so that the dates and days of the meetings may be made most convenient to all concerned.

The TRANSACTIONS of the Society have been somewhat delayed in production, owing to several causes inseparable from a first issue. The Transaction Sub-committee received estimates from several firms of printers, and resolved to accept that of Messrs. Hall and English, of Birmingham. They decided to have 1,000 copies printed, so that the expense might be reduced by the insertion of a few carefully selected advertisements, and that each member should pay 5s. and have twenty unbound copies and one bound copy supplied to him, the remainder to be sent to the various scientific societies in Europe and America.

In conclusion your Hon. Secretaries beg to thank the members for the number of interesting and instructive cases which they have placed before the Society, and for the lively interest displayed in connection with the several papers and discussions, and, while regretting the somewhat small numbers attending some of the meetings, they feel that the members may congratulate themselves that the Society has been highly

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successful in advancing orthopædic knowledge during the past year, and may look forward to still further advancement in the future.

EIGHTH ORDINARY GENERAL MEETING.

After a short adjournment the Society proceeded to hold an Ordinary Meeting, Mr. Noble Smith presiding.

The minutes of the last ordinary meeting were read by Mr. Tubby and confirmed.

EARLY DIAGNOSIS OF AFFECTIONS OF THE SPINAL COLUMN.

PAPER BY MR. WM. THOMAS.

In directing your attention to the subject which is to form our topic of discussion to-night, I think you will all agree with me that if there is one thing more important than another, nay, I would say than all others, for the successful treatment of disease of the spinal column, it is that the diagnosis should be made as early as possible; but it is unfortunately too well known that patients apply to us for treatment or relief when the disease has advanced so far that deformity of an irremediable character is already established, and our efforts can only be directed to staying the progress of the malady and preventing further disfigurement.

The object of the present paper is to ascertain, chiefly by the discussion which I hope it may excite, what are the early symptoms of disease of the spinal column and how they may be most easily demonstrated. In order to keep our discussion within reasonable limits I shall endeavour to confine my observations to lateral and angular curvature, these being perhaps the most common forms of spinal deformity. Though differing somewhat in their pathology and etiology, they are equally liable to be overlooked in their early stages.

There are many reasons why the early symptoms of disease of the spinal column are so frequently overlooked. They are very indefinite and often point quite as much to other conditions as to spinal. There is also a general indifference of the public and even of the profession in regard to the incipient symptoms of spinal disease when compared with the anxiety excited by those of other affections, say, for example, disease

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of the lungs. Should a youth or a girl be affected with a slight cough, anxiety is at once aroused, the lungs are carefully examined, consultations are held, and every care is taken to ascertain the exact nature of it. Should the same individual complain of aching in the back, weakness, or any of the early symptoms of spinal disease, it may be attributed to indolence or hysteria; rarely is the spine examined, and only when rigidity has set in, and cure of the deformity become almost hopeless, is any special attention given to it. It is a great pity the spine cannot cough and thus draw attention to its troubles.

The spine is remarkably tolerant either of injury or disease. It is a curious circumstance that severe injury may be experienced or advanced disease may be present without the patient having suffered enough pain to cause a suspicion that there was anything wrong with the spine, and affords a singular contrast to the excruciating pain and utter helplessness produced by an attack of lumbago.

Many years ago a man was brought into the hospital where, at that time, I was House Surgeon, who had fallen from the back of a cart on to his head. He appeared dazed, but declared he was not hurt and wished to go home; but fortunately this was not permitted, and he was admitted and placed in bed. Some hours after, as he had not passed water, catheterism became necessary, and it was noticed that he had priapism. A further examination was made with negative results, and the case was supposed to be one of injury to the head. Paralysis gradually came on, and in two or three days he died. The *post-mortem* examination showed that no less than five cervical vertebræ had been fractured.

A boy, aged 6, was brought to see me in consequence of a small, irregularly shaped, hard swelling on the inner side of the left thigh over the adductor muscles. On removal it proved to be a sequestrum of bone. Further examination of the patient revealed an angular lumbo-sacral projection. I could obtain no history of spinal troubles, nor of injury nor disease. I was told that he had not suffered from any accident and that he had always enjoyed good health. His mother had never noticed the angular projection and was not aware of its existence until it was pointed out to her. Yet the spine must have suffered enough violence to break off a portion, or osteitis must have occurred of sufficient intensity to cause the death and separation of a mass at least three-quarters of an inch in length and half an inch in thickness.

A youth with a well marked dorsal, angular curvature was brought to me. The curvature had quite recently been noticed,

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He had played football regularly and without inconvenience, except that his arms had grown weak and he was not able to "tackle" so well as he had been. He was of strumous temperament, and other joints seemed likely to inflame.

I have selected the above cases to illustrate what I mean by the remarkable freedom of the spine from pain, even after extensive injury or disease. I could bring forward many others, and I have no doubt that all of us have had experiences of a similar character. Personally I have found nothing more difficult than to fix a time at which any spinal disease first began to show symptoms. In directing your attention to the manner of examination in searching for the early symptoms of lateral or angular curvature, I would say that the same routine of examination is applicable to both, though the pathology and etiology perhaps differ somewhat. I would take lateral curvature first, and prefer in an assembly such as the present to use the term scoliosis as more accurately defining the condition. It is well known that scoliosis is more frequently discovered by the dressmaker or tailor than by the surgeon—not because he is unable to find it out, but because the early symptoms are often so slightly marked that they do not arouse the attention of parents, and the medical attendant is not consulted.

I have often thought this ought not to be, and we cannot do our duty to the public as surgeons more than by warning them of the serious results which may follow even apparently slight injuries to the spinal column, and the importance of examination of the spines of growing children. Many cases of deformity ought to be discovered sooner than they are, and it is the fault of parents and teachers rather than the medical profession. In these days of medical inspection of school-children we ought to claim for the spine its fair share of attention.

What are the early symptoms of scoliosis, and how can we demonstrate them? Are there any symptoms, subjective or objective, on which we can rely as certain indications of lateral curvature?

The subjective symptoms of scoliosis are very indefinite—no one seems to know exactly what they are, and such as are attributed to it are so mixed up with hysteria, kidney, uterine and other conditions as to render diagnosis very difficult and uncertain. When it becomes the rule to examine the spine as carefully as other organs of the body, our knowledge will no doubt be increased. At present the surgeon runs some risk of the suspicion that he is trying to make a case if he asserts that certain symptoms might be the precursors of spinal curvature.

Our difficulties in finding out the early symptoms of scoliosis

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are not assisted by a knowledge of its morbid anatomy, which from various circumstances it is most difficult to obtain. We have no *post-mortem* evidences to explain how the condition is brought about. Specimens of old and advanced scoliosis are common enough in our pathological museums, but they do not tell us how and when the condition began, nor whether the deformity was produced by accident, disease, or irregular growth.

We know that it is most frequently met with in growing girls, but it comes on in adults and occurs in infants—in the last, however, it is probably due to congenital malformation of the spinal column itself. In adolescents it is often attributed to the assumption of incorrect attitudes, but in a large number of those—in the majority of growing girls and youths who sit or lounge in an awkward manner—the spine does not become affected, or apparently rights itself as the body becomes more mature.

In the absence, then, of subjective symptoms which are trustworthy, we must endeavour to detect the earliest objective signs of commencing deformity.

A great many cases of weak and painful spines are being constantly brought under our notice. In the majority of these, deformity neither exists nor follows, but among them we must look for cases of slight or incipient scoliosis, and therefore the examination in all should be thorough, searching, and complete.

In examining for symptoms of suspected scoliosis the patient should be completely undressed, and the body and limbs carefully inspected in a good light. We should note—the general build of the subject; the condition of the soles and arches of the feet; the shape of the ankle, knee, and hip joints; the lines of the gluteal folds and iliac crests; the equality, or otherwise, of the interval between the last ribs and iliac crests; the shape of the ribs; the position of the scapulæ.

During this part of the examination the patient should stand easily with the back to the light and the heels together. We now direct the patient to stand quite straight. The attempt to do this will often reveal a slight spinal curve, or may restore the spine to its normal condition in some cases where the easy position induces a curve or is accompanied by asymmetry of the scapulæ or gluteal folds. It also causes contraction of the erectores spinæ muscles, and demonstrates any inequality between them. Any perceptible difference in the size and position of the projection formed by these muscles on each side of the line of spinous processes is one of the earliest and most certain signs of actual scoliosis, and should always be carefully looked for.

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There is a symptom, of the value or otherwise of which I I am not yet, without further experience, prepared to speak. I allude to clonus of the erectores spinæ—or, perhaps, it might more appropriately be termed spinal clonus. I have not seen it mentioned in books, and do not know to what extent it is employed by others. It is produced by pressing downwards and somewhat sharply on one shoulder, and then, holding it firmly, the effect is a slight clonic contraction of the erector spinæ muscle. I have only noticed it in cases of slight curvature accompanied by pain; but I am disposed to regard it as a condition worth considering, and possibly one of the early signs of scoliosis. I should be glad to know how far it has attracted the attention of others.

We next proceed to test the mobility of the spine, and for this purpose nothing is more valuable than the staff or pole in common use at all gymnasia. It is well to have a couple of movable rings on it, so that in using it the distance between the hands may be defined, and also to prevent them sliding apart. With the hands grasping the staff it is elevated horizontally above the head. To test the mobility of the spine, the staff is moved horizontally downwards and forwards, or downwards and backwards—the head being kept in the same relative position to the staff by closely following its movements.

To test the lateral mobility the staff is held perpendicularly in front of the patient, the hands a certain distance apart; it is then transferred to the back reversed, *i.e.*, the hand which was superior in front becomes inferior behind. Care must be taken that the hands are not too far apart and do not slide; the staff should be grasped firmly, or the arms will move without much affecting the spine. By this manœuvre much valuable information may be obtained both as to the mobility of the vertebræ and the action of the muscles of the spine and thorax.

We should next note the condition of the natural curves of the spine. In the normal condition if an individual is placed on his back on a hard, smooth surface, with the thighs drawn up and the arms crossed in front, so as to relax as much as possible the muscles and ligaments of the spine, it will be found that the spines of the vertebræ will practically touch the surface on which the body rests throughout the whole extent. Any deviation by which the spines are prevented from touching must be produced either by increase of normal curvature with rigidity or by lordosis or cyphosis due to disease. To carry out this part of the examination properly the patient must be placed on a table with only a single layer of blanket, or on a

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couch formed with a plank surface not too much padded. The fingers can be easily passed under the patient, and the contact of the spines with the surface of the couch demonstrated.

The condition of the individual vertebræ in the dorsal region as to rigidity may well be ascertained in the following manner. With the patient in the upright position, place the tips of three fingers in the depressions between the vertebral spines; make firm pressure, and at the same time direct the patient to bend forwards. In the normal state the intervals between the finger tips will be increased, but in the rigid spine the distance between them remains the same.

Such an examination as I have described is usually enough to detect almost any deviation from the normal state; but whether the condition is old or recent, stationary or progressive, can only be revealed by time and experience. Careful consideration to the subjective symptoms should also be given, and the previous history may give important information as to how the condition originated.

In angular curvature the objective symptoms, though frequently overlooked, are usually more easily demonstrated. Rigidity, or at least stiffness, appears early, and if associated with girdle pains, little difficulty is experienced in early diagnosis. When the patient is old enough the methods of examination detailed above may be adopted, and if carefully carried out will ensure the early detection of the slightest rigidity.

The use of the hot sponge is disparaged in these days, but I have known it give the first indications of mischief, and its employment certainly does no harm. It used to be the custom to seek for spinal tenderness by pressing sharply on the head or shoulders. I do not think this is of much value, and is not unattended with danger.

Seeing that angular curvature or spondylitis is due to osteitis of the bodies of the vertebræ, we might naturally expect that the thermometer would help us a little in the diagnosis. I am inclined to think that many early cases of spondylitis with pain in the back or abdomen, are attended with a rise of temperature; but the spine is not thought of as a cause, and inflammation of some internal organ is diagnosed and supposed to be cured before the angle is developed and the incipient stage passed. The symptoms of spondylitis in its earlier stages may be simulated by so many other diseases, that it is no wonder the most experienced occasionally are mistaken; and there are a number of cases which are, so to speak, on the borderland of scoliosis and spondylitis, and which

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almost form a distinct class in which the diagnosis is peculiarly difficult. Such cases usually occur in girls of from 16 to 20 years of age or more, who may have been fond of riding, tennis, cycling, and other active out-door games. Suddenly they begin to complain of gradually increasing pain and weakness in the spine, aggravated by exercise. The pain is in most cases in the lower dorsal and upper lumbar regions. On examination the spines of the last dorsal and upper lumbar vertebræ project abnormally, and the skin over them is red or brown in cases that have existed for some time. There is tenderness in the bodies of these vertebræ when the spines are pressed on, and the front of the spine is tender to abdominal pressure as the patient lies on the back. A very small minority of such develop an angle, and therefore all of them demand our careful attention. It is too much the custom to treat such cases as hysteria; but although this may be so in some it certainly is not so in all. In the majority rest gives great relief, but with exercise they grow steadily worse. Fix the spine and improvement takes place; after being fixed for a time the good effect of rest becomes apparent. I believe that many of such cases are due to injury of the inter-vertebral fibro-cartilages, followed by a kind of chronic inflammation; but it is difficult to prove the pathological condition for obvious reasons. The family history is very important in deciding the nature of such cases, especially if the patient be of a rheumatic or strumous temperament. The strumous diathesis plays a very important part in diseases of the spinal column, and when it exists extra care should be taken and additional importance given to any signs of pain or stiffness.

It would take up too much time were I to extend my observations so as to make them include the special symptoms found in disease of the different regions of the spinal column, but I hope I have raised sufficient points for discussion. In conclusion I would repeat that the early symptoms of disease of the spinal column are insidious and indefinite; that as there are none which can fairly be considered pathognomonic it is the safest plan to treat all suspicious cases as spinal until time and careful study have demonstrated their exact nature.

DISCUSSION.

Mr. NOBLE SMITH expressed the Society's indebtedness to Mr. Thomas for bringing before them a paper on a subject of such importance, and one on which he thought they ought to give forth to the world some definite opinion. For the purpose

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of saving time he had embodied his own remarks in writing, and these he read as follows :—

It is suggested by Mr. William Thomas that we should limit our remarks to the two most common spinal disorders, namely—lateral and angular curvature. In considering the earliest symptoms it is necessary to be clear, or as clear as we can be, as to the nature of these disorders.

With regard to angular curvature, by which we here infer caries, its nature is sufficiently well known. Tuberculosis is undoubtedly the predominating, if not the only condition which gives rise to the disease, whereas with regard to *lateral curvature* opinions differ considerably as to the etiology. The opinion which predominates amongst medical men who are not specialists in Orthopædic Surgery is, that lateral curvature depends chiefly or entirely upon weakness of the muscles of the back. This view will not bear the test of practical experience, for although there are undoubtedly a large number of instances in which weakness of these muscles exists, yet it seems to have escaped observation that the muscles are only weak co-existently with the weakness of other tissues of the body, and that the joints of the spine are also weak and give way too readily, just as flat feet occur from weakness of the tarsal joints. We meet also with a considerable number of cases in which there are no signs that there is muscular weakness, in which, in fact, the muscles are remarkably well developed, and yet the spine has become seriously deformed by unmistakable lateral curvature.

However, as a rule it is among the weakly children, and especially those who have a family history of tuberculosis and in whom we might naturally expect to meet with caries, that we also find weakness of the back leading to lateral curvature, and therefore the constitutional condition of the patient will be no safe guide in forming our diagnosis. Of course if a child be suffering from an unmistakable disease of one or other joint, *morbus coxæ* for instance, and symptoms that might be attributed to caries of the spine occur, these latter symptoms would have a greater import. On the other hand, should there be no sign of tuberculosis, and should the patient be robust and apparently healthy and yet show symptoms of giving way in the spine, posteriorly or laterally, we shall yet not be justified in excluding caries as a possible condition.

Pain.—We all know the classical first symptoms which are ascribed to caries, such as langour, listlessness, and unwillingness to move at all quickly, the limited action being associated with more or less stiffness of the spinal column; but in cases where movement does not cause pain rigidity may possibly be

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absent. I may here refer to the œdema which so frequently occurs in the neighbourhood of carious vertebræ.

I will pass over the other symptoms which are described in every text book, and proceed to touch upon a few which have been less clearly defined. At the time when I first began to write about *absolute absence of pain* in many cases of caries, such a fact was not generally acknowledged, and even now it is only those who have had considerable experience with this disease who seem to recognise that pain is not unfrequently absent. When pain exists in the early stages of spinal disorder it is undoubtedly a most valuable symptom, and especially if it coincides with the locality of the spine in which some local symptoms predominate. In incipient lateral curvature there may be pain, but I have never seen in such a case that extreme caution which accompanies the pain of caries.

High temperature.—A temperature slightly above normal, but persisting day after day, varying between quite normal in the morning and one to two degrees higher at night, is a most important symptom of caries. However, one meets with many instances of caries in which no rise of temperature can be detected, and therefore even as regards this symptom its absence does not indicate, for certain, an absence of caries.

Rigidity.—In caries, as we all know, there is usually more or less rigidity of the spine in the neighbourhood of the disease. This symptom, however, is not so clearly defined as it is in cases of inflammation of the more movable joints, such as the hip and knee, and sometimes it cannot be detected at all.

If the disease be situated in the lower dorsal or in the lumbar vertebræ, causing slight posterior projection in these regions, it may be a question whether the projection is the result of posterior curvature from weakness of the ligaments of the spine, or from caries. Under such circumstances the presence or absence of rigidity should be determined. I need hardly remark that the patient should be placed in the prone position, when, if the case is one of weakness only, the projection disappears, while if inflammation exists the projection remains more or less permanent. Careful elevation of the legs, while the patient lies in the prone position, will intensify this result. Movement in other directions will also generally be found limited as a consequcnce of the rigidity when caries is present.

In cervical caries the rigidity shows itself in stiffness of the neck muscles, and this often affects the head laterally, producing wry-neck. There is usually a great difference between wry-neck from caries and that from permanent muscular contraction. In the latter it will probably have existed for a long time, and

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there will be little or no pain, or at least pain of a less distressing nature; there will be firm and unalterable contraction of probably the sterno-mastoid muscle alone, and the face may be atrophied on the depressed side and the features distorted.

In caries, other muscles as well as the sterno-mastoid will probably be affected, and the head will be held in a manner more expressive of pain, and support of the head will relieve the contraction and the pain to some extent.

In simple torticollis the movements of the head are only restricted in one direction; in caries the head is kept in one position, but not commonly restricted in any, if carefully handled, because in torticollis from caries, movements in any direction are painful, whereas in true torticollis, pain, if any, only occurs from movement in one direction. Rest in bed for a few days will often relieve the torticollis of caries.

In the latter affection there may be a condition of spasm of the muscles, and in adults it may be difficult to distinguish between this disease and "spasmodic torticollis."

I have known torticollis having all the characters of the simple affection to exist in a child for many months before it was recognised as a symptom of disease of the bones. Inflammation of lymphatic glands of the neck alone may produce torticollis, and this may be very difficult to distinguish from caries in its early stages. In caries of the cervical vertebræ there *may*, however, be very free movement.

The nerve symptoms in caries take a most important place irrespective of their production of pain, and although they become better defined as the case advances, yet even in the early stages they are generally present, and are then of great value. Spasmodic movements of the legs, and especially "night cries" are important early symptoms, and there are many others too well known to need discussion. Then there is the characteristic grunting respiration with which we are all familiar.

Deformity.—This symptom of course belongs more especially to the advanced stages of both lateral curvature and caries, but yet there may be considerable difficulty even when deformity is present.

In the first edition of my work on "Curvatures of the Spine," published in 1883, I referred to lateral deformity occurring in the early stages of caries; I have enlarged upon the subject in subsequent publications. More recently the subject has received further attention. In the year 1889 Dr. Bernard Bartow read a paper before the New York State Medical Society, entitled "The Presence of Spinal Distortion in the Early Stage of Spondylitis, and its Value as a Diagnostic Sign." Dr. Bartow is

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of opinion that some degree of lateral distortion occurs in almost every case of caries of the spine, appearing even before any angular deformity. I cannot say that I have seen this symptom so commonly as Dr. Bartow has, but I quite agree with his explanation of this complication. He considers that it is caused by the attempts of the patient to rest the inflamed part of the spine when a lateral deviation takes place. The vertebræ rotate as a natural mechanical result, and the voluntary reflex contraction of the muscles immobilises the bones in such a position. In the *Revue d'Orthopédic* for November, 1892, le Dr. Kirmisson writes upon the same subject. He quotes Dr. Henry Taylor and Dr. Ketch of New York, and also Dr. Lovett of Boston.

In my small work upon Spinal Caries, published 1894, I have described and figured several cases of this kind. The lateral deformity referred to under these circumstances doubtless arises from weakness and is independent of the lateral curve in which caries commences on one side of the spinal column.

When lateral curvature is a sign of commencing caries the deflection may be more acute than in scoliosis, and there may be projection as well as lateral curvature. There may be projection of spinous processes in the latter condition, but there is a distinction to be made between the two when the patient stoops. The spinous processes in caries do not as a rule separate from one another, whereas when no ulceration of bones exists they do.

No surgeon who has had much experience of these cases would forget the fact that caries sometimes attacks limited portions of the vertebræ, such as central portions of the bones. Under such circumstances the ordinary symptoms will be very much modified, and the characteristic deformity will be absent.

The possibility of the existence of congenital lateral curvature from the absence of part of a vertebra should also be borne in mind. The term angular curvature is, I think, unfortunate, especially in respect to this subject of diagnosis, for so many cases occur, especially in their commencement in which general roundness of the back exists, and no angle is formed.

Röntgen Rays.—This method of forming a diagnosis may be of great value in certain cases.

In conclusion, I would urge that when we have no certain signs from which we can be absolutely sure whether the case is one of caries, or simply weakness, it behoves us to use the utmost caution, and we should treat the patient as if inflammatory disease were present. In many instances have I seen "caries" rapidly developed by rough and incautious treat-

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ment; especially have I seen disastrous results following the very popular treatment of weak backs by gymnastic exercises. I cannot but reiterate what I have said and published over and over again, that delicate children whose backs are weak, in conjunction with general weakness in the body, should be treated by rest and support, at least in the earliest stages of their trouble.

Mr. ROBERT JONES said he laid a great deal more stress than either Mr. Thomas or the chairman had done upon rigidity as an initial sign in spinal caries. He thought the cases in which it did not occur as a very early sign were distinctly exceptional. It was a symptom of more importance than pain, and should, he thought, be looked upon as the most diagnostic. One did, now and again, meet with the exceptional case, and Mr. Jones operated lately upon a case where there was no spinal symptom, and where he operated for an abscess in the neighbourhood of the kidney. This abscess was not in connection with the kidney, but with the body of the second lumbar vertebra, and he picked from it a tiny piece of bone not bigger than a pea. In Mr. Jones's experience pain on pressure is a symptom absent as a rule in tubercular disease of the spine. One could press or tap very hard over the spinal column even when there was a marked kyphos without eliciting pain. He furthermore had discarded the sponge-test years ago, as he found that in the majority of instances, where there was no doubt about the caries, there was no increased heat on the application of the sponge. If any symptom of pain was to be relied upon, he should say that intercostal pains were of more diagnostic value in early caries than pain over the site of disease. Mr. Jones laid great stress on the method of examining young children, directed to elicit the absence or presence of rigidity. To be successful it was absolutely essential to be gentle, and not to inspire fear in the child.

As to temperature, at the time Bradford was drawing attention to the increased temperature in cases of tubercular joints as a sign of the commencement and of the disappearance of disease, he had himself made a good many experiments. In the case of a number of joints, obviously not well, he had noticed no change in surface temperature, while in some there was. He had found the same in a case of the spine, he therefore agreed with the chairman that temperature was distinctly an unreliable test. Mr. Jones had often, as others had, noticed a lateral deviation as one of the initial signs of angular curvature, but he thought there ought never to be any confusion

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between lateral deviation in Potts, and lateral deviation in scoliosis. In the one case there was rigidity, and in the early cases of lateral deviation the curve was merely postural, and could be readily straightened. Mr. Jones had made mistakes in depending upon the rigidity in cases where there were deep-seated abscesses in connection with the spine; but these had generally been of an acute character. Mr. Robert Jones gave examples of disastrous results occurring after suspension. Five or six years ago he was called by a medical man to a case which had been under treatment in one of their large hospitals where suspension had been employed. The disease was high up and paralysis had resulted. The late Mr. Thomas had told him of an interesting case where an attempt had been made to straighten the spine, and in which also paralysis had followed. He had himself shown in the Medical Institution at Liverpool a case in which a bone-setter had forcibly straightened the back, with the result that paralysis had ensued next morning. Under scientific auspices it might have been done more cautiously, but that the risk existed was, he thought, beyond all question, and he could not imagine that the treatment could be much shortened. They were speaking largely upon theory, of course, but he felt inclined to hesitate before accepting this doctrine without a careful definition of its limitations. Spines had been shown in cases which were supposed to have recovered, but even eight, twelve years afterwards the carious process was still going on. It was well known the children might go about without any symptoms while the inflammatory process was still active; so that it was a difficult matter for Calot or any surgeon to assert surely that complete recovery had taken place.

Mr. TUBBY thought that although diagnosis in many cases, especially early instances of Pott's disease, was comparatively easy, there were some cases in which a "surprise" diagnosis came upon them. In two conditions especially was this the case. First, there were cases of caries where, so far as the patient could tell, there had been no previous symptoms with the exception of slight pain, but where examination revealed the existence of a large abscess. The first objective symptom of any importance in these cases was a large abscess either above or below Poupart's ligament; and before proceeding to operate for this the routine examination disclosed slight prominence of the vertebræ and rigidity. Second, there were cases in which, before any sign of Pott's disease appeared, symptoms of compression-paraplegia suddenly set in. This compression paraplegia preceded any

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prominence or projection of the spine whatever, and was the first thing for which advice was sought. These were the two sets of cases which were particularly astounding and astonishing, and which went for a long time undiagnosed. He cited a case in which a child suffering from some pain in the region of the stomach had been treated by a general practitioner and watched for two years for some supposed trouble about the liver. Unfortunately, he never thoroughly examined the child and so failed to discover the spinal condition, as was afterwards done by another surgeon. That was a case which might easily have been diagnosed; but unfortunately there were others in which there was no pain, prominence of vertebræ nor rigidity, and in which either an abscess or compression-paraplegia was absolutely the first indication of any disease.

He thought the most valuable sign was undoubtedly rigidity, and in this connection he would like to amplify Mr. Jones's remarks, who, he thought, meant to indicate *local* rigidity, although he had not actually used the word "local." One of the earliest signs of Pott's disease was local rigidity. The three or four affected vertebræ or the vertebræ in the neighbourhood of the affected spot moved together. In a healthy person the spinous processes after flexion and extension could be felt by the hand placed over any region of the spinal column to come back to place one after the other, whereas in Potts' disease three or four would move together, not separately. In most cases, however, there was an antecedent condition to that, namely, some localised rigidity of the erector spinæ on either side of the affected spot. Of the early signs, therefore, he considered rigidity the best.

He might, perhaps, be allowed to take exception to one expression used by Mr. Thomas. It did not seem to him quite correct to speak of scoliosis as a *disease*. The two subjects of illustration, scoliosis and caries, had the common feature of a lateral deviation, but the former he did not think could be called a disease.

With regard to *recumbency*—he agreed with Mr. Noble Smith that it was of more value in cervical than in dorsal caries.

He had not had much opportunity of observing œdema in spinal caries except in connection with abscesses which were making their way to the surface in the dorsal or lumbar region.

Mr. FREER agreed with Mr. Thomas that it was surprising how blind the friends of patients generally were to the earlier stages of spinal curvature, so that it was usually left to dressmakers and tailors to make the first discovery of any deviation.

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In this connection he might refer (though it might seem apart from the subject in hand) to the fact that, besides having the first opportunity of discovering the condition they were sometimes responsible for its causation by making almost all their customers have their coats and dresses too tightly fastened in front and too easy behind, which was exactly the reverse of what was insisted on by Tommy Atkins, who, when he went to the master tailor to have his tunic smartened up, had it made tight behind and easy in front.

In connection with scoliosis, he had on several occasions noticed symptoms of clonus, of distinct muscular reflex.

He agreed with the opinion that the symptom of rigidity was of the highest importance in diagnosis of spinal caries.

Of one class of spinal affection several cases had been brought before him in consultation, namely, those in which in a thin subject a number of spinous processes were very prominent and painful and showed a thickening over them, the practitioner feeling some doubt as to whether spinal disease existed. There were often five or six of the vertebræ presenting these features. In the majority of these cases he believed there existed a sort of periostitis of the spinous processes, set up, he was inclined to think, by the pressure of buttons, laces, stay bones, &c., on the spinous processes. In these cases, if they employed the usual methods for diagnosis they found an absence of rigidity, each vertebra bending equally upon the others, but they were extremely painful. By applying some form of corset that was soft behind, and so keeping pressure off the spines the disease (if such it might be called) or the affection had been entirely cured. It was not mentioned in books; but he felt sure that cases in which five or six vertebræ were affected, and in which no girdle pains were associated with the condition, arose from this pressure and friction in already thin subjects with rather prominent spinous processes.

Mr. NOBLE SMITH suggested that the condition mentioned by Mr. Freer was of the nature of the "typhoid spine" spoken of by some American surgeons, in which periostitis occurred after typhoid fever.

Mr. JACKSON CLARKE referred to a class of case in which the early symptoms were apt to be overlooked—that, namely, in which tuberculosis began in elderly subjects. They were all on the look-out for spinal affections in children, but in elderly people tuberculosis now and again made its appearance in the vertebræ and was apt to be overlooked until very grave consequences had supervened. He had been asked by Dr.

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John Shaw to see such a case in Hampstead, the patient being an old gentleman 71 years of age. In that case the early symptoms were recognised and a skiagram taken by Dr. Shaw. There was rigidity and pain in the cervical region. The skiagram showed distinctly an anterior concavity instead of an anterior convexity in the whole cervical region, with irregular erosions, and there was no doubt that it was due to disease of the spinal column. No evidence that it was of the nature of growth, such as sarcoma, &c., could be found. They therefore came to the conclusion that it was spinal caries. The whole history of the condition was only one of some months' duration. The patient shortly afterwards succumbed to the results of enlarged prostate, cystitis, &c. Dr. Shaw made an autopsy and found the whole cervical region affected with typical and pretty advanced tuberculosis. In another patient—scarcely so advanced in years, being only 45—death was due to atlo-axoid disease. In this instance also (which was under the care of Mr. Page at St. Mary's) the history was a short one of some months. He (Mr. Clarke) had heard of disastrous cases in old people where tuberculosis of the spine had been overlooked.

Mr. D'ARCY POWER asked whether in the last case cited by Mr. Jackson Clarke there was necrosis or caries.

Mr. JACKSON CLARKE replied that it was a case of extensive caries.

Mr. FREER supplemented his remarks by mentioning a case in his recent experience in which the patient suffered for some months from what his medical attendant thought was sciatica. This was so severe as almost to double him up. One day the patient drew Mr. Freer's attention to a lump on his buttock which he found, on examination, to be an ischio-rectal abscess. An incision being made, there was discharged not fœtid but perfectly pure pus. When a probe was passed, it seemed to go immediately through the sciatic notch. The patient, on being questioned as to the receipt of any injury, spoke of having fallen down some steps two years before, bumping on each step in his descent. His condition being attributed by his medical advisers to sciatica, he had kept up his hunting two or three days a week through the season. The question suggested itself to him, whether there might not be some lumbo-sacral mischief, the abscess being formed not as an ordinary ischio-rectal abscess, but as one which had opened through the sciatic notch into the ischio-rectal fossa. He would like to know the opinions on this point of those able to deal with the question better than himself.

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Dr. SEPTIMUS SUNDERLAND suggested that it might be well at some future time to have a special discussion on the treatment of these conditions. To many of the members it would be very useful. While making no claim to special knowledge of most orthopædic work, he would like to refer to the symptom of persistent pain in connection with the lumbar and lower dorsal regions occurring without any disease or curvature of any kind. Amongst young ladies between the ages of 11 and 20 he had seen a fair number of such cases, and had noticed that very frequently they were subjects with long backs. The elder ones spoke of themselves as "long-waisted." He assumed the length of the spinal column had a greater influence in the causation of their symptoms than would be the case in shorter women. Such cases improved by a certain amount of rest and a specially made corset, combined with massage and exercise of the muscles of the back.

Mr. THOMAS, replying to the discussion, claimed the remarks of the chairman as largely supporting the statements of his paper. Mr. Jones, he thought, had done him a little injustice in representing him as laying insufficient stress on rigidity as a diagnostic symptom. Perhaps the statements of the paper had not been made sufficiently emphatic, and might have been delivered in a more dramatic manner, so that rigidity might have come out more strongly; but he did attach importance to it. With reference to pain, he had been accustomed to test for that—or rather for tenderness, for the two were very different things—by placing the patient on his back, relaxing the abdominal muscles and pressing down on the front of the spine. This method of examination had frequently afforded him valuable information.

Mr. Tubby had mentioned compression paraplegia as being in some cases one of the first symptoms. That, he himself thought, must be within the knowledge of them all. Mr. Tubby had also taken exception to his calling scoliosis a disease. It might be a condition at first, but it certainly was a disease later on when the ribs were firmly fixed by ossification. It was certainly on the borderland of disease, if not actual disease in itself. A broken leg was not a disease, but if it were badly set and got into an awkward position he thought it might then be considered a diseased condition.

Mr. Freer, speaking of cases with projecting and tender spinous processes, attributed the condition to periostitis of these processes. He himself thought that it was the cause of the redness and the superficial tenderness, but his impression

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was that the back itself was also weak; and a long period of bad attitude, such as sitting with the back curved behind, so that there was pressure on the intervertebral substance in front, though not resulting in the development of actual deformity or rigidity, caused the projection of the spinous processes behind, and as a secondary effect of that there was produced by pressure of extraneous substances a local periostitis of these spinous processes.

The question of the development of tuberculosis in elderly people mentioned by Mr. Jackson Clarke was one he had not thought it necessary to burden his paper with, as he wished to keep within the strict limits of the subject. Had he written all that he could the paper would have taken the whole night to read. They knew, however, that there was a period of life (at about 40) when there was a somewhat increased tendency to the development of spinal curves. Spinal curvature, especially angular curvature, was usually considered a disease of childhood and youth; but he had seen many such cases occurring about the age of 40. He could relate from memory at least half a dozen where a great strong man suddenly began to develop stiffness in his back and then spinal curvature. Nearly all the cases he had met with were in people of strumous family.

A remark by Dr. Sunderland had reminded him of something he had meant to include in his paper, namely, the bearing of uterine and ovarian diseases upon the early diagnosis of curvature of the spine. Quite recently a patient had come under his notice with a very tender spine, so that she was unable to stand or sit or lie down with comfort. He at first thought she must have some commencing caries, but, although it was very painful to elicit movement, the spine was perfectly flexible. On careful examination *per vaginam* he noticed that there was an enlarged and tender ovary. Having explained the origin of the condition, he lost sight of the case, the patient having put herself under the treatment of a gynæcologist.

The CHAIRMAN conveyed to Mr. Thomas the thanks of the Society for his admirable paper, and on his motion, seconded by Mr. TUBBY, a cordial vote was passed to this effect.

On the motion of Dr. SUNDERLAND, seconded by Mr. D'ARCY POWER, a vote of thanks was passed to the Treasurer.

Mr. THOMAS proposed, and Dr. SUNDERLAND seconded, a vote of thanks to the Secretaries for their great exertions for the welfare of the Society.

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Mr. TUBBY, in acknowledging the vote, stated that it had been his intention to resign the Secretaryship; but the representations of his colleague, Mr. Freer, had induced him to reconsider the matter, especially as he felt a deep debt of gratitude to Mr. Freer for taking upon him the necessary work in connection with the first volume of the TRANSACTIONS, and he hoped to do his share in bringing out the second volume.

A vote of thanks to the Council of the City Orthopædic Hospital for their kindness, through Mr. Noble Smith, in granting the use of the Board Room for the meeting, terminated the proceedings.

NINTH ORDINARY GENERAL MEETING.

Held at the WEST LONDON HOSPITAL, HAMMERSMITH, W.
Friday, March 12th, 1897.

Thirteen members and visitors were present, and Mr. C. B. KEETLEY was voted to the Chair.

Mr. TUBBY read the Minutes of the Annual Meeting held on December 18th, 1896. These were approved.

The Minutes of the last ordinary meeting having also been read were confirmed.

Mr. ROBERT JONES was asked to act as Auditor.

The Treasurer's Report for 1896 was received and adopted on the motion of Mr. TUBBY, seconded by Mr. ROBERT JONES, Mr. TUBBY stating that he did not think there was sufficient material in only two years' previous experience of the Society for the Treasurer to be able to compile an estimate of the coming year's expenditure, the object for which, on the recommendation of Mr. Thomas, the adoption of the Report had been postponed.

It was agreed to accept the recommendation of the Council that a Sub-committee be appointed to consider the arrangements for the publication of the Transactions of Session 1896, the committee to consist of—Mr. Keetley, Mr. Robert Jones, and the two Hon. Secretaries, and to report at the next ordinary meeting.

It was unanimously agreed that Rule 13 relating to the meetings of the Society be altered so as to provide for four ordinary meetings being held each year, viz., in December,

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February, May, and the first week in October, the precise dates to be determined by the Council.

Mr. CHISHOLM WILLIAMS was granted leave to postpone his description of a case of angular curvature in an adult till the next meeting in London, so as to allow of the exhibition of the patient.

SPONTANEOUS INWARD DISPLACEMENT OF THE SCAPHOID BONE.

CASE BY MR. JACKSON CLARK.

Mr. JACKSON CLARKE showed a case of spontaneous inward displacement of the scaphoid bone. He stated that when the patient, a young woman, first presented herself at the North West London Hospital, she showed a distinct inward displacement of one scaphoid—the right—unaccompanied by any flat foot, but attended with a good deal of pain. The condition had lasted some months. The other foot was entirely normal. The arch of the affected foot was much better than the average. He concluded that the condition was due to inward displacement of the bone, and not a mere thickening, from the fact that there was a distinct depression over the outer part of the scaphoid. The foot was slightly everted. The patient had since developed rheumatism in one shoulder, in which there was some pain, and which she was unable to move. He therefore thought that there was probably some rheumatoid arthritis that might have led to the condition. He had found that by putting a figure-of-eight bandage round the ankle, the part was supported and the pain relieved. He therefore had a simple support made, consisting of a strap of webbing with a wash-leather pad to go over the scaphoid, and with the use of this the displacement had been to some extent reduced and the pain relieved. The skin was a little red and the bone a little prominent, but much less so than it was at first.

DISCUSSION.

Mr. KEETLEY remarked that there certainly did seem to be a certain amount of displacement of the scaphoid inwards. He noticed that there was a condition of valgus of each ankle which, perhaps, might have tended to squeeze the scaphoid a little inwards. It might seem to be more displaced than it really was, as it had been subject evidently to some pressure, and there might be a little thickening over it. He thought, however, that the bone itself was prominent.

Mr. TUBBY stated that he had seen two or three cases of a similar kind in girls with a long foot—with a long arch, so to

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speak—in whom it was an antecedent condition to general falling of the arch; but why the scaphoid especially should suffer and become displaced, he was at a loss to know. In one case with no definite flat foot, the patient suffered so much from the displaced scaphoid that he chiselled off the promontory of the scaphoid so that the patient could walk very comfortably with the aid of a support on the inner side of the foot. There was a distinct class of case occurring in girls about puberty, with long-waisted and delicately formed feet, in whom there was general relaxation of the ligaments as shown by the valgoid ankles. In order to get the bone back into position, he had tried prolonged rest, inversion and exercises, but so far he had not succeeded, the only effectual measure in his hands having been chiselling off the promontory of the bone, sewing up the wound and getting the cicatrix on the dorsum of the foot where it would not be pressed on. He had had one or two cases where marked valgus of the ankle existed, and the arch was so high that the middle of the foot did not reach the ground either on the inner or the outer side, but in which, when the patient contracted the outer muscles, the foot was dislocated or subluxated outwards off the scaphoid. In the patient shown, when the front part of the foot was moved outwards the two cuneiform bones moved outwards, leaving the scaphoid projecting, and the scaphoid seemed to be itself prominent.

Mr. MUIRHEAD LITTLE said such cases were very like those called by Schaffer "non-deforming club foot." There were also cases in which the tuberosity of the scaphoid was prominent, and the arch had not yet fallen. He had, however, never seen very marked pain associated with the condition as in the patient shown.

Mr. NOBLE SMITH remarked that the action of the posterior tibial muscle, in its efforts to keep the foot in a straight position, tended to drag the scaphoid and internal cuneform inwards.

Mr. LUKE FREER said he thought in these cases there was undoubtedly a valgus condition of the ankle, and, on the other hand, a condition almost approaching to a slight pes cavus rather than to a flat foot. He hardly thought it would degenerate into a flat foot. Possibly the extreme pain was due to the subluxated or dislocated scaphoid pressing on the boot so that a form of periosteal irritation was set up, just as in the case of the spines of the vertebræ from the pressure of buttons, &c., so that the condition was sometimes mistaken for caries. Putting on one side the fact of the high arch, he would be inclined to suggest the use of a pad and some means, perhaps

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even Thomas's heel, simply to take the pressure off the inflamed subluxated scaphoid.

Mr. KEETLEY suggested that a Roentgen Ray picture of the foot, taken with the patient bearing her weight upon it, would be interesting. In one of his own cases he had a very flat foot X-rayed, and the most remarkable thing about it was the descent of the outer arch, the os calcis being almost perfectly flat. In connection with the depression on the outer side, it occurred to him that perhaps the outer arch had descended. Lorenz said it descended first. The os calcis and the cuboid and the fifth metatarsal bone coming down might have tilted or pushed the scaphoid inwards.

Mr. ROBERT JONES agreed with the descriptions already given of the condition present. The foot certainly seemed a long one. The easiest mechanical explanation seemed to him to be that as the patient walked on the inner side of the foot, putting pressure on the toe and the os calcis, the scaphoid, being the central bone, was most readily displaced where there was a tendency to laxity of the ligaments, not pronounced enough, however, to produce flat-foot. He agreed with Mr. Freer that from the foot being very well built up in the under surface the marked dislocation of the scaphoid might be due to the absence of any downward fall. He also thought the best treatment would be to remove all pressure from the scaphoid. He did not think a little filling in on the inner side of the boot was enough. A support to make the patient walk on the outer side of the ankle would be best. It did not seem to him one of the feet likely to become flat as the patient walked on the outer side—although one did associate the condition with flat feet and low arches. He would, therefore, recommend getting the patient to walk more on the outer side, crooking the boot a little, applying a side iron, bandaging the ankle, and giving proper exercises to the tibialis posticus.

Mr. JACKSON CLARKE thanked the members who had taken part in the discussion, from which he had received valuable hints both as to the investigation of the case and its treatment. He would have the suggestion about photographing the foot carried out, and endeavour to show the skiagram and the results of the modified treatment suggested at a future meeting. There was no indication for cutting away a piece of the bone in the case shown, as Mr. Tubby had done, since there was no evidence of pressure of the boot upon it. The pain was not due to pressure; any redness and signs of pressure they had seen have appeared since he had applied his rough-and-ready apparatus. He had noticed the general weakness and the valgus condition of the

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ankle, but that had become more marked since he saw the patient last, and he would now adopt a more thorough-going mode of treatment. Mr. Noble Smith's remark about the tibialis posticus was a very valuable one as explaining part of the ingoing of the scaphoid. It would represent an active factor, in addition to the passive factor dwelt on by the other members.

Mr. NOBLE SMITH drew attention to the treatment of Potts' disease by attempts at immediate reduction as practised by Dr. Calot of Berck-sur-Mer, sensational reports of which had appeared in the general press. This plan of treatment had been adopted many years ago by empirics, and had met with disastrous results. Dr. Calot placed his patients under chloroform, put on such pressure as was necessary to get rid of the projection, applied plaster-of-Paris bandages on the whole trunk, and left these jackets on for five or six months. Dr. Calot stated that they were then perfectly cured. This treatment required very serious consideration. Was it possible that by such a procedure the results as described were obtained? In a paper read last December before the Academy of Medicine in Paris, Dr. Calot cited thirty-seven cases, of which thirty-five had been treated in the manner quoted, in the other two laminectomy having apparently been performed. If an ordinary case took, as Dr. Calot said, from two to three years for resolution and fixation to occur, while he obtained resolution in six months, it must be remembered that such a result occurred with a much greater gap between the carious bones than under ordinary circumstances. Mr. Noble Smith said he had himself been in the habit of considering that *a year* was the shortest time in which it was possible to obtain perfect resolution and fixation in a carious spine. It had always been laid down that it was improper to separate the diseased parts because of the gap that would be made. That seemed to have been accepted as a rule for years. He had himself, however, exhibited at the British Medical Association at Bournemouth a specimen which showed that such a gap—a very large gap—might be entirely filled up by new bone. It was a case in which the seven lower dorsal and four upper lumbar vertebræ were affected with caries. The child being in a very emaciated and critical condition, they did not think he could live, but by fixation and other treatment the patient improved, and eight months afterwards began to get about, and continued to do so (still fixed up) for two years with apparent comfort; then tubercular meningitis occurred and he died.

On *post-mortem* examination a cavity was found in the four lower dorsal and first lumbar vertebræ, the bodies of which were

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absolutely gone; the arches only remained, so that the spinal cord must have been exposed in the cavities of the body. New bone, however, had been thrown out, so as to completely enclose the spinal canal and afford such a firm basis of support that the child had been able to get about and was gradually improving in health until the meningitis occurred. In the preparation of the specimen all the new bone crumbled away. It now showed, therefore, a great gap, such as no doubt originally existed. This case proved that even in so delicate a child, and with a gap of three and a half inches in its vertical extent, with the bodies entirely gone, the process of repair could take place. The idea that a gap could not be filled up was disproved by that one specimen. Another consideration was suggested by that case. The child had been doing well and getting about, and yet, at the end of two years, that bone was not sufficiently solid to bear maceration. If that were the case in a good result after two years, he could not imagine (even if repair took place as well as Dr. Calot said it did) that an absolutely firm spine could be obtained in five or six months. Moreover, the question arose, Was it a safe or a risky procedure? Dr. Calot had produced thirty-seven cases, but, so far as he knew, had not stated whether he had had any failures. With regard to the sudden restoration of shape, the only cases with which he could compare this treatment were those of which the following was a typical instance. It was a case of distinct angular curvature, in which, about a year after treatment had been commenced; the spine was thought to be getting perfectly solid, and the child was made (but not at his advice) to do certain exercises—amongst others, to hang by a horizontal bar. Acute symptoms rapidly came on, lumbar and psoas abscesses formed, and the patient died. One of the most difficult conditions to deal with was a constant discharge of bone — not of absolutely disintegrated bone, but of little pieces with smooth edges such as are found in the process of degeneration in caries. These pieces, it appeared to him, seemed to act as foreign bodies. The syringing out of the abscesses was not followed by the good results generally obtained, and the patient gradually sank. It seemed to him that if in the cases Dr. Calot operated on there was anything like commencing repair, he ran the risk of disturbing these elements and producing irritation. This one case, of course, did not prove the contention, but it was a question worth consideration. If they could straighten the bones and get rid of the deformity it would certainly be a very satisfactory result. His practice for years past had been to attempt to straighten the spine by very gentle means, not using any great force, but being

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guided by the comfort of the patient and the progress of the case. In this way the projection was very often lessened considerably. He had often thought that this produced a distinct improvement in the part itself, the bones becoming somewhat extended.

DISCUSSION.

Mr. KEETLEY said he was not quite satisfied that in the specimen described by Mr. Noble Smith it was actually new bone that had formed. One met with a good deal of new bone in connection with the removal of sequestra. It was generally very hard bone, and not such as would be likely to disappear on maceration. That might, of course, be different from the new bone found in connection with caries; but still a good many specimens were to be seen in museums where new bone, thrown up around carious parts, had not been affected by maceration. It was to be seen accumulated around the spinous and transverse processes of vertebræ with long-standing caries, tying them together. It had occurred to him that it might be worth while to try to produce artificial ankylosis of the laminæ and transverse processes. It might be difficult to produce artificial ankylosis of the laminæ, but it ought not to be difficult to cause ankylosis of the articular processes by an operation similar to that of Ogston for the relief of flat foot. In the case of tubercular joint disease ankylosis afforded a much better prospect of the tubercular process being brought to a close. He thought, therefore, that it would neither be an irrational nor a difficult mode of treatment to try to bring about ankylosis of the articular processes. At the International Medical Congress in 1881, there was a curious debate about attempting to straighten out diseased spines in which the late Dr. Sayre made an extremely eloquent speech. He was extremely hard upon Langenbeck of Berlin who was said to have had a fatal case, the patient having had a plaster-of-Paris jacket put on under chloroform. Dr. Sayre was most emphatic in saying that no attempt should be made to straighten out the spine, and that to do so was contrary to his doctrine. Yet in his own book Dr. Sayre had distinctly contemplated straightening out the spine, and had actually given diagrams to show it. Having himself worked at Sayre's treatment and taken tracings for a long time, he (Mr. Keetley) was satisfied that a gentle suspension did straighten out considerably some cases and slightly almost all.

Mr. TUBBY said he had treated several cases in the Orthopædic Hospital by suspending the patient by the head and

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shoulders, the body weight being supposed to separate the diseased parts, the object being to remove a certain amount of pressure. In three cases he had found that directly the children were put in that position the spasm became much worse, and the reflexes were much increased as if there were irritation of the spinal cord. With reference to this treatment of Dr. Calot's, it would seem that in Potts' disease the spinal cord escaped as the back became more rigid, the supposition being that the meninges were shortened, and the symptoms which may follow the attempt to straighten must be due to nerve stretching all down the spinal column.

Mr. JACKSON CLARKE, speaking of the pathological aspect of the question, said that in a great many specimens examined *post-mortem* the anterior common ligament was found quite separated from the vertebræ over a certain distance, while in some he surmised that a certain amount of periosteum went with the anterior common ligament. If so, it would not be impossible to imagine *a priori* that a certain amount of new bone would be thrown out in place of the vertebral bodies removed by caries. He remembered one case under Mr. Poland in which, as far as he could ascertain, an angular curvature had absolutely disappeared from gradual straightening obtained by the use of a Chance's splint; and in his opinion the only attempt at straightening of the spine should be of an extremely graduated kind, without violent measures.

Mr. NOBLE SMITH said the possibility of there being any doubt as to the material in the specimen he had described being new bone had not occurred to him. As far as he could judge it was distinctly bony material. There were undoubtedly attempts at bony growth both from above and below. It was only the central portion that came away. It seemed that the bone first thrown out in these cases was not very hard, but that consolidation occurred gradually, so that in the specimen he referred to the central portion had not had time to become sufficiently firm. He would be glad to know Mr. Keetley's opinion as to what the material might have been. It certainly was not old carious bone filling up the cavity.

Mr. KEETLEY said he had not formed any particular theory as to what it was; but still he did not feel quite clear that it was new bone; he quite agreed, however, that it might have been if the anterior common ligament and the periosteum, as stated by Mr. Jackson Clarke, had not been destroyed. He had thought it might perhaps be one of those cases commencing by a superficial caries which eats backwards.

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CONGENITAL DISLOCATION OF THE HIP.

OPEN OPERATION—SUCCESSFUL RESULT.

CASE BY C. R. B. KEETLEY.

Mr. KEETLEY showed a girl, 13 years of age, on whom he had operated for congenital dislocation of the hip three months previously. The original shortening, when the heel was pressed up without forcing it, was three and a half inches. The head of the bone could be felt just below the crest of the ilium. This could be reduced, however, by pulling on the limb to an inch and a half. She was kept in bed for two or three months with an extension of sixteen pounds on most of the time. This she bore pretty well, and it brought the leg down so that the shortening was about an inch and a half or an inch and a quarter. In the meantime an incision was made and the long head of the rectus cut, as well as the front of the capsular ligament, and also some of the fibres of what Mr. Keetley believed to be the psoas, and, in addition, of the tensor fasciæ femoris. That improved the condition, and after a week or two longer of extension a kind of lever was made so that by moving a weight away from the fulcrum a certain distance the weight was multiplied to eighty-four pounds. That was on, while the patient's tissues were relaxed under an anæsthetic, for a considerable time—twenty minutes or half an hour. The shortening could thus be reduced to less than an inch, and Mr. Keetley was satisfied he could get the head of the bone down to the natural site of the acetabulum. He had previously made a posterior incision with the view of dividing muscles there, but the glutei and other muscles not interfering at all, it was found unnecessary. He re-opened the first incision and continued it downwards and also made a transverse incision. He was satisfied there was not a trace of acetabulum, there being merely a little lump which might possibly be the remains of the upper rim of the acetabulum. Everything was otherwise quite flat. With a gouge and chisel and a sharp and large Volkmann's spoon he made a good large acetabulum very deep on the outer side. A longitudinal incision was then made in the capsule and the transverse incision previously made was reopened. The head of the bone being then turned out of the capsule he worked it into the new acetabulum. Before making the new acetabulum he reflected the muscle and periosteum from the side of it in a flap which he turned outwards. Having made the hole he put the flap back again, so that it very nearly covered all the bare bone and *certainly covered all the bare bone touched by the*

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head of the femur, the cartilage of which never touched bare bone, being simply on fascia and muscle. The femur had a fairly developed head and neck, considering the patient was thirteen years old. The head of the femur was very conical, and directed considerably forwards, so that to get the head of the femur into the hole the foot had to be inverted. There was now a shortening of only an inch and a quarter, and there was a good deal of movement which was checked quite as much by the stiffness of the knee as of the hip. There was not any large amount of abduction, but there was quite a considerable degree of rotation.

DISCUSSION.

Mr. TUBBY congratulated Mr. Keetley on the eminently successful result he had obtained. One of the objects the Society might carry out, it seemed to him, especially in view of the somewhat chaotic state of the treatment of that affection, was that of the collective investigation of these cases. During the past five or six years most of them must have seen cases of the condition shown, and if they could embody in their reports a collective investigation extending over several years, not merely of symptoms, but of the course of the cases they had met, they would be doing a service. He suggested the appointment of a collective investigation committee, which should be permanent, or at least extend over several years.

Mr. ROBERT JONES supported the proposal. It would be most interesting, he said, to see these cured cases. He was really helpless with respect to advanced cases of the condition, of which he could at any time show about fifteen examples.

Mr. NOBLE SMITH said it was a question of how the collective investigation would be carried out. His experience of collective investigation committees in connection with the British Medical Association was not a very favourable one. He suggested that it might be well in the first instance to get individual members to work separately, collect cases and bring them before the Society, which a committee could then be appointed to investigate.

Mr. TUBBY did not think views as to treatment were what was wanted. What they did want was to ascertain actual facts with respect to the condition at birth and the condition at various periods as the cases progressed.

Mr. MUIRHEAD LITTLE suggested that such a committee as was proposed might see the cases before treatment was begun, then in the course of a year or two, and again at the

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end of treatment, so that actual facts might be recorded which nobody could dispute. This would have more weight with the medical public than reports by each man on his own cases.

Mr. TUBBY thought it would be difficult to get the cases and the committee members together. His idea was that the committee should meet, and put down certain points which required elucidation. These could then be left to the individual members to work out.

Mr. MUIRHEAD LITTLE pointed out that individual members might bring particular cases before the committee, which would make a record.

Mr. ROBERT JONES suggested that as many cases as possible should be collected from London and seen by the Society, when notes and measurements could be taken and a register kept. The after history could then be followed. The same thing might be done in the provinces. It was difficult to get the early history of these cases. Nobody noticed anything about them, as, unless there was a good deal of pain the child walked about. It was an interesting question as to whether these cases, especially unilateral ones, were congenital.

Mr. TUBBY thought the matter concerned the Society so intimately that it should be referred to the Council. He therefore moved accordingly.

Mr. JACKSON CLARKE seconded this proposal, which was agreed to.

A vote of thanks to the governors of the hospital for the use of the board room concluded the proceedings.

TREASURER'S REPORT.

GENTLEMEN,—In submitting to you the Balance Sheet for 1896, I have much pleasure in saying that I believe only two members have not paid their subscriptions for that year, and that only one of them is in arrears for 1895. This is due, not to myself, but to my colleague Mr. Tubby, and of course to the punctuality of the members themselves.

There is therefore a substantial balance in hand viz., £11 9s. 1d.

As I believe we have now a membership of thirty-five, of whom, on November 1, only two had paid for the coming year, our potential balance at the moment I write is about £28. Our past experience shows this to be a reliable estimate.

Further, there is the contribution of 5s. due from each

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member on account of cost of TRANSACTIONS. This has not yet been collected. If fully paid up it will produce about £8, which, added to £28, will amount to £36 altogether, as what we may hope to command in the course of the current year.

On the other side we have to reckon with (1) several unpaid accounts, (2) the ordinary expenses of the current year, and (3) the cost of the TRANSACTIONS. It is not possible at present to obtain and lay before you the amounts of these. The only serious matter will be the cost of the TRANSACTIONS. Our Editor and Secretary, Mr. Freer, is endeavouring to get the accounts in, and they will be laid before you at our next meeting.

I remain, gentlemen,
Yours obediently,
C. B. KEETLEY.
(*Hon. Treas.*)

56, *Grosvenor Street*,
Dec. 18, 1897.

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Balance Sheet of British Orthopædic Society,

Dr. *for Financial Year ending November 1st, 1896.* Cr.

	£	s.	d.		£	s.	d.
To 26 Subscriptions	13	13	0	By Type-writing, Reporting, etc. ...	1	17	4
,, 5 Subscriptions in arrear now paid	2	12	6	,, Printing (Adlard, £1; Ash & Co., 8s. 6d.)...	1	8	6
,, 2 Subscriptions paid in advance	1	1	0	,, Refreshments, &c. (in 1895) ...	1	5	5
				,, Postage and Sundries	1	2	10
				,, Deficiency on November 1st, 1895	0	3	9
				,, Balance in hands of Treasurer...	11	9	1
	£17	6	6		£17	6	6

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E. LUKE FREER, M.R.C.S.Eng.,
9, Newhall St., Birmingham.

Auditor—

ROBERT JONES, F.R.C.S.E.

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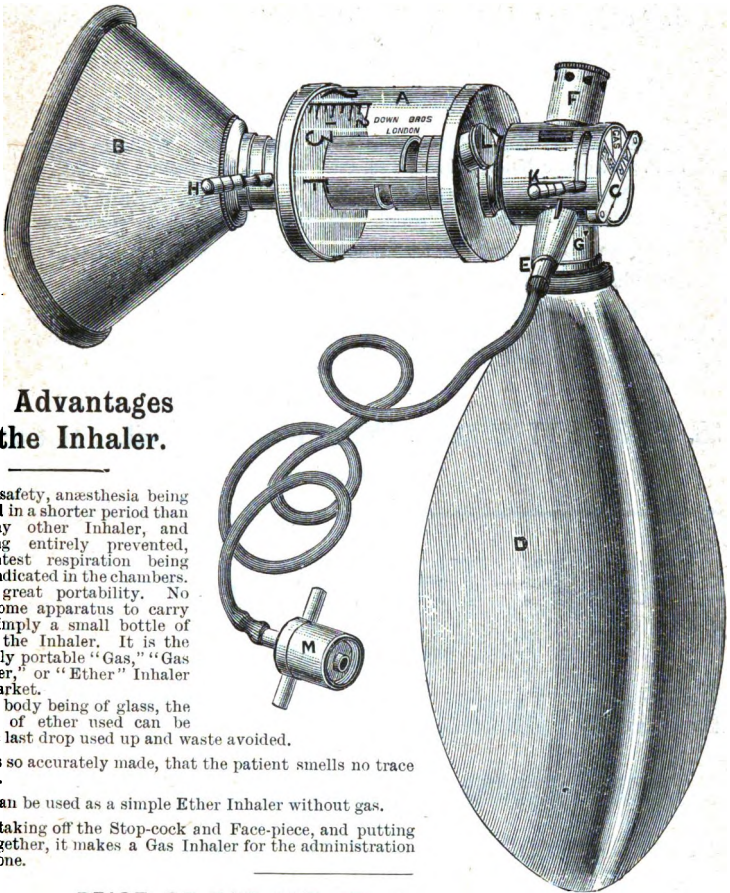

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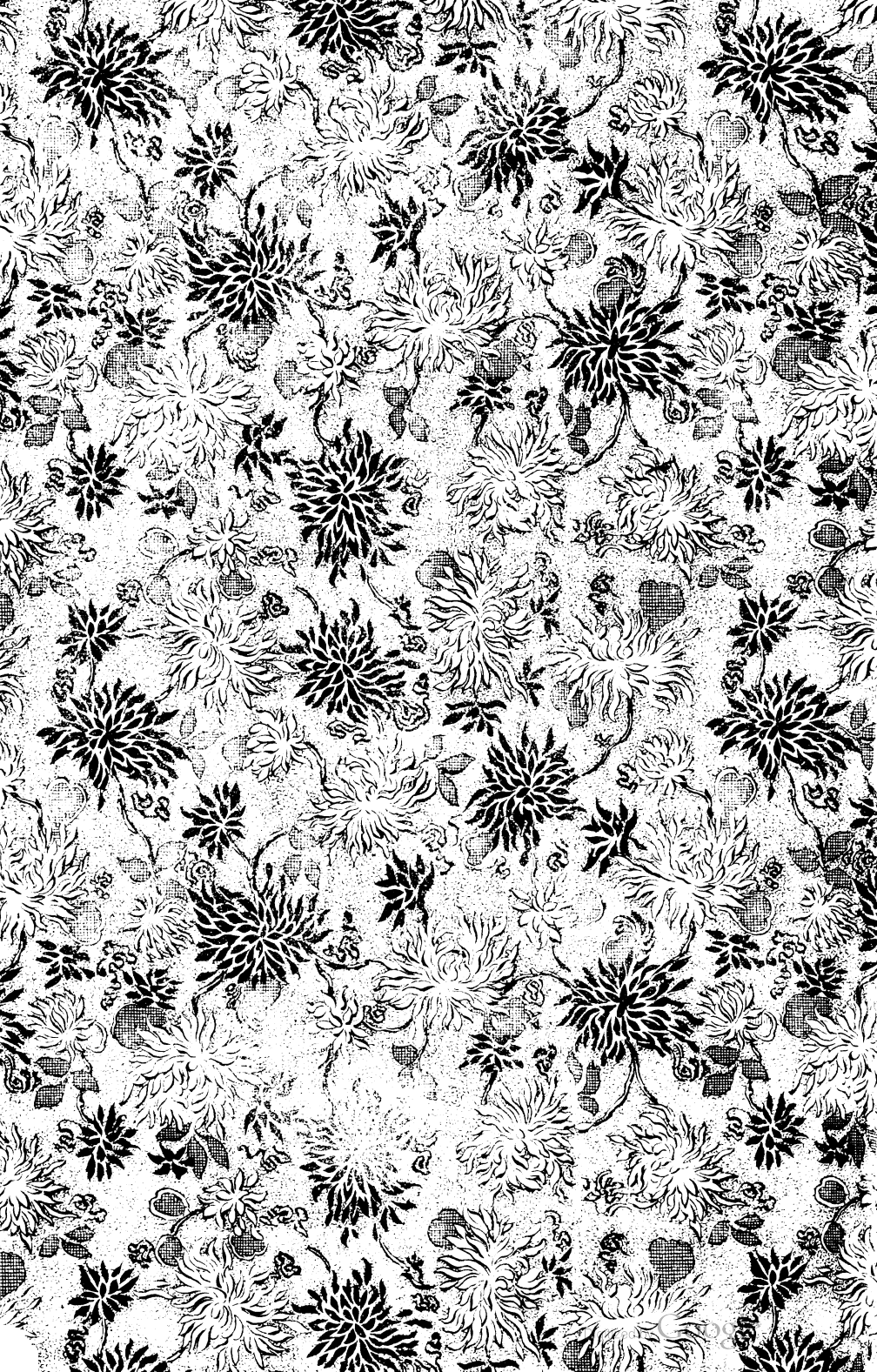
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